BEYOND DATA PACKETS

Cisco broadens its reach to include application messaging. PAGE 7

MONEY DOWN ON IT

Harrah's CIO Tim Stanley hopes integrating its loyalty systems with Caesars' will lead more gamblers to ante up. PAGE 10

COMPUTERWORLD

THE VOICE OF IT MANAGEMENT ▪ WWW.COMPUTERWORLD.COM

JUNE 27, 2005 ▪ VOL. 39 ▪ NO. 26 ▪ $5/COPY

Targeted Attacks Pose New Security Challenge

Customized pinpoint attacks are harder to combat than mass assaults, security pros say

BY JAIKUMAR VIJAYAN

Targeted hacker attacks, such as the one believed to have caused the massive credit card security breach disclosed this month, are low tech and well understood. Nevertheless, they are extremely hard to stop, IT managers said last week.

The growing problem is compelling companies to implement defense strategies that emphasize data-level monitoring and protection mechanisms and stronger user authentication to supplement their network intrusion-detection and egress-filtering measures.

"We're clearly seeing a trend away from broadcast attacks to much more targeted and much more sophisticated types of attacks," said Andreas Wuchner-Bruhl, head of global IT security at Novartis Pharma AG, a drug maker in Basel, Switzerland. "Dealing with it is much tougher."

Attacks, page 16

INSIDE

Smart ID card rules challenge fed agencies. PAGE 77

App Simulation in Demand

BY HEATHER HAVENSTEIN

As IT development operations spread beyond data center and national borders, some companies are looking to new simulation technology to bridge the gap between application development plans and the requirements submitted by business users.

Moves by IT organizations to boost offshore development and better utilize dispersed project teams are quickly increasing the need for the emerging tools, which let developers build prototype applications that can be reviewed by users.

CNA Financial Corp. in April began an initiative

Simulation, page 77

THE TOP 5

1. Quicken Loans Inc.
2. University Of Miami
3. American Fidelity Assurance Co.
4. American Century Investments
5. Network Appliance Inc.

12th ANNUAL REPORT

100 BEST PLACES TO WORK IN IT 2005

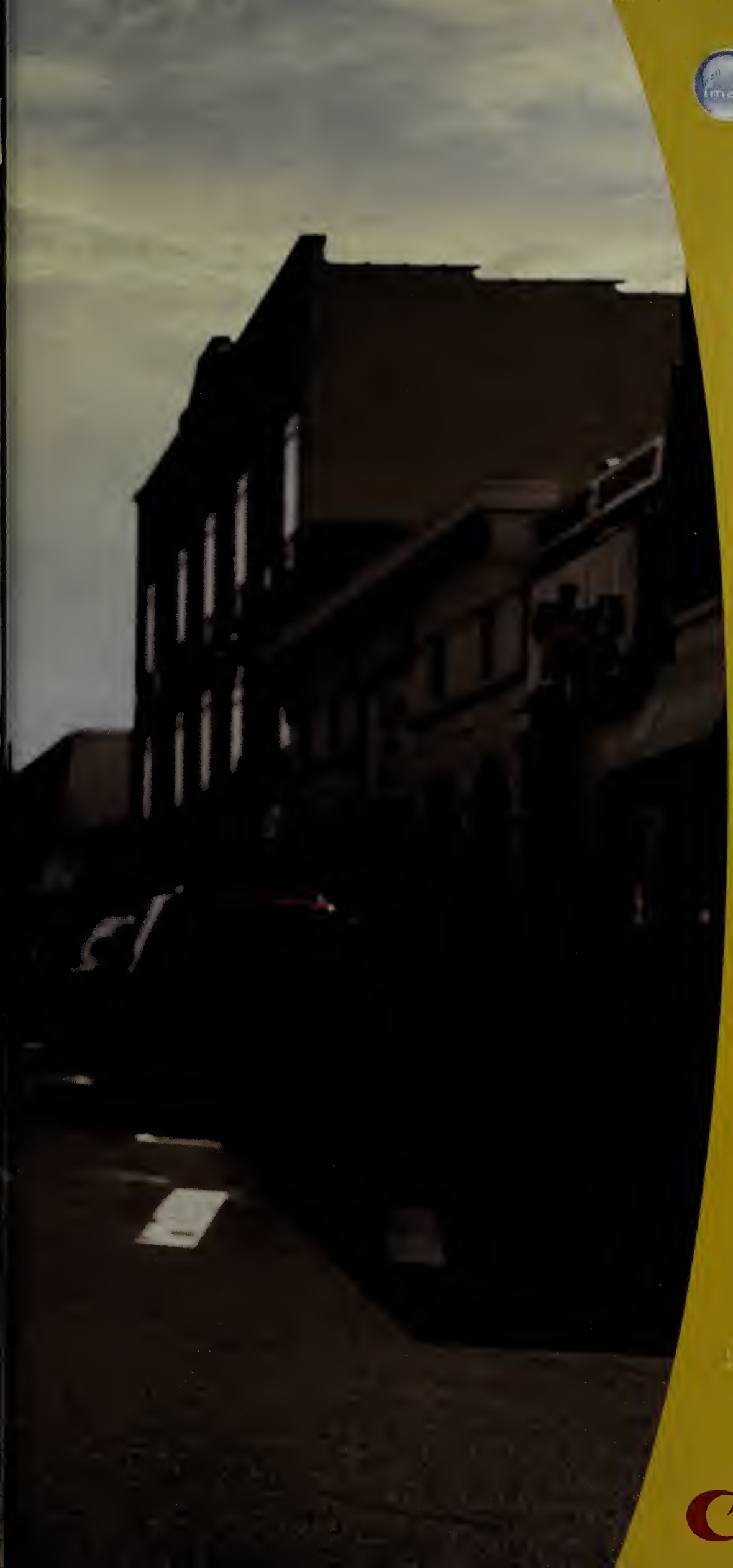
These select companies have can-do workplaces where cool projects and competitive pay are standard fare — and some even have lavish perks. Their strategies seem to be working: This year's survey of more than 20,000 IT workers shows upticks in job satisfaction and morale. Page 25

ONLINE Where do you want to work?

Find the top IT employers for diversity, training, benefits and other factors. Plus, sort by region. QuickLink a6210

NEWSPAPER

7:02 am
Section



imageANYWARE™

imageRUNNER 4570

We brought the power of the network to the copier.

And the potential of another day is realized.

If you could create, manage, and share documents on paper or over the network, imagine what you could accomplish with your day. With Canon's latest addition to the imageRUNNER® line, every day's potential can be realized. With the new imageRUNNER 4570, Canon gives you another innovative solution to seamlessly integrate the paper world with the digital world. And the imageRUNNER 4570 can be tailored to meet your business needs. In other words, when you choose the new imageRUNNER 4570, you choose to work the way you need to.

www.imagerunner.com 1-800-OK-CANON

Not business as usual.

reg ... imageANYWARE is a ... rights reserved.

Canon KNOW HOW®

SAS® SOFTWARE AND INTEL®
ITANIUM® 2 PROCESSOR-BASED SERVERS

THE POWER TO KNOW®

how to put the next big idea within everyone's reach.

SAS and Intel give
PFIZER HEALTH
SOLUTIONS INC
The Power to Know®
how to help its clients
provide effective healthcare
to more than a half-million
patients. Read our success
story at www.sas.com/phs.

Power users have been tapping into SAS' unmatched breadth and depth of analytics for years to drive their organizations forward. Now innovation can come from anyone, anywhere in your company. While most BI vendors deliver historical reporting solutions, SAS® business intelligence and analytics software – on Intel® Itanium® 2 processor-based servers – empowers you to predict outcomes and make more effective decisions throughout your enterprise. SAS takes you *Beyond BI*™ by making it easy to put the power to know in the hands of everyone.

go Beyond BI™ at **www.sas.com/BItour** • **Free product tour**

intel®

sas®

SAS and all other SAS Institute Inc. product or service names are registered trademarks or trademarks of SAS Institute Inc. in the USA and other countries. ® indicates USA registration. Other brand and product names are trademarks of their respective companies. © 2005 SAS Institute Inc. All rights reserved. © 2005 Intel Corporation. All rights reserved. Intel, the Intel logo, and Itanium are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries. 329693US.0505

CONTENTS

06.27.05

NEWS

6 **Sun unveils** an open-source version of its application server, plus a new enterprise service bus.

6 **CVS shuts down** a purchase-tracking feature on its Web site because of concerns that it could have allowed hackers to obtain shoppers' records via e-mail.

7 **Cisco announces** networking technology designed to manage application-to-application messages.

10 **Harrah's bets** that up to 90% of new revenue expected from its merger with Caesars will come from the integration of their loyalty programs and supporting IT systems.

12 **HP e3000 users aren't waiting** for Hewlett-Packard to decide whether it will release the source code for the discontinued computer's operating system.

12 **Increased sniffing activity** on a TCP port may indicate that attackers are preparing to exploit a Microsoft software vulnerability, according to Gartner.

14 **SCO updates OpenServer** in a bid to keep the operating system relevant.

OPINIONS

Don Tennant 22
Michael H. Hugos 22
Michael Gartenberg 23
Frank Hayes 78

DEPARTMENTS/RESOURCES

At Deadline Briefs 6
News Briefs 8, 12
Letters 23
IT Careers 69
Company Index 76
How to Contact CW 76
Shark Tank 78

ONLINE

What's a QuickLink?

On some pages in this issue, you'll see a QuickLink code pointing to additional, related content on our Web site. Just enter that code into our QuickLink box, which you'll see at the top of each page on our site.

ONLINE DEPARTMENTS

Breaking News
QuickLink a1510

Newsletter Subscriptions
QuickLink a1430

Knowledge Centers
QuickLink a2570

Computerworld Store
QuickLink a2420

100 BEST PLACES TO WORK IN IT 2005

This year's Best Places to Work in IT know the secret to building a strong and satisfied IT workforce: More than money and benefits, it's the value of the work itself. Read how this year's top 100 companies offer their IT workers projects that challenge the mind and amenities that soothe the soul. Package begins on page 25.

FIRST-RATE FIVE

It's no accident that these companies hit the top of this year's list. We look inside five amazing IT departments:

BEST PLACES, BEST PRACTICES

62 **IT for Hire.** Learn how this year's top companies are beefing up the IT ranks and finding the right talent after years of slow growth.

64 **Above the White Noise.** IT faces a flood of communication from the entire company. How can you keep your IT staff and business units focused on what's really important? These Best Places companies show the way.

66 **Beyond the Suggestion Box.** Keeping teams productive and creative is a challenge for IT organizations. We checked in to see how managers encourage the free flow of ideas, suggestions and innovations.

100 BEST PLACES TO WORK IN IT

44 **See our full list of the top 100 companies,** with information about training, staff turnover and promotions. Plus, learn how the Best Places were chosen, and check out statistics from a survey of more than 20,000 IT workers from the final 100 companies.

WWW.COMPUTERWORLD.COM

Where Do You Want to Work?
Find the company that fits your priorities with our sortable chart. Identify the top companies for diversity, training, benefits and other factors. Plus, sort by region: QuickLink a6210

Inside the Best Places. View the top benefits and retention methods at the 100 Best Places, plus check out statistics on future hiring and training budgets at QuickLink 54594. Survey results from IT workers at the top 100 companies show satisfaction ratings for bonuses, salaries, morale, training and other factors. QuickLink 54593

AT DEADLINE

EMC to Port Apps to Solaris

Sun Microsystems Inc. and EMC Corp. said they have improved compatibility between Sun's Solaris 10 software and EMC's storage systems. The vendors created a system customers can use to get help from either company. EMC will port its PowerPath, Documentum, Legato and Smarts applications to Solaris 10. Sun agreed to resell Legato NetWorker.

Ameritrade Buys TD Waterhouse

Online broker Ameritrade Holding Corp. has agreed to buy rival TD Waterhouse USA from Toronto-Dominion Bank for $2.9 billion in stock. Ameritrade CEO Joe Moglia will hold the same post in the combined company once the acquisition is completed. The deal is expected to close in six months. Ameritrade also agreed to sell its Canadian brokerage operations to TD Bank for $60 million.

Symantec, Veritas Get Merger OK

Stockholders from Symantec Corp. and Veritas Software Corp. have approved the merger of two companies. The merger is expected to close on Saturday. About 76% percent of outstanding Symantec shares were voted by shareholders, with nearly 95% cast in favor of the merger. About 98% of the 73% of Veritas shares voted in favor of the merger.

IBM Unveils 16-Way Supercomputer

IBM announced its latest supercomputer, the eServer p5 575, at the International Supercomputer Conference in Heidelberg, Germany. IBM said the new server, powered by a 1.5-GHz Power5 processor, will ship by the end of 2005. The new system runs AIX, SUSE Linux Enterprise Server 9 and Red Hat Enterprise Linux AS.

Users Dubious About Sun Open-Source Plan

Vendor moves to release its application server code, add enterprise service bus

BY HEATHER HAVENSTEIN

USERS LAST WEEK expressed some skepticism about Sun Microsystems Inc.'s plan to offer its application server software under an open-source license.

The so-called GlassFish project to offer the Java System Application Server Platform source code on an open basis will be formally announced this week at the vendor's annual JavaOne conference in San Francisco. Sun will also use the JavaOne stage to unveil an open-source enterprise service bus (ESB).

Arnaud Lucas, a senior integration architect at Houston-based online consumer network WhiteFence Inc., said he already uses JBoss Inc.'s namesake open-source application server and wouldn't consider switching to Sun's alternative offering.

Lucas, who is also president of the Houston Java User Group, described the move as Sun's attempt to boost its application server market share against encroaching open-source products such as JBoss and The Apache Software Foundation's Geronimo.

Mark Johnson, a senior consultant at Montreal-based CGI Group Inc., said that JBoss has a command of the open-source application server market today.

"JBoss has a lot of mind space there, and it will take some effort to throw JBoss off its perch," said Johnson, a member of the New England Java Users Group.

Anne Thomas Manes, an analyst at Burton Group in Midvale, Utah, agreed that the market for open-source application servers likely isn't large enough to support another vendor.

Joe Keller, Sun's vice president of marketing for application and developer platforms, said the move is designed to lower the barrier of entry for developers to use the application server software.

"This is a community around the implementation of Java from the source of Java," Keller said. "It is not a competing community to things like Eclipse. It has the ability of having community developer participation, which [other application server vendors] don't have."

Frank Greco, who founded the New York Java Special Interest Group in 1995, said his group's members would likely consider using Sun's open-source application server because the software is now becoming a commodity.

"People are tired of paying overly expensive licenses for a technology that doesn't scale too well and is complex to develop and manage," said Greco, CEO of Java engineering firm Crossroads Technologies Inc. in New York.

Greco and others are less enthusiastic about Sun's ability to tap the burgeoning ESB market with its unveiling of an offering based on the newly approved Java Business Integration specification. The spec is designed to help Java developers build service-oriented architectures.

Greco noted that many developers today are already struggling to use Enterprise JavaBeans — the Sun specification for how Java objects will interact — and don't need the additional complexity of Web services. In addition, integration vendor Tibco Software Inc. already has a strong hold on New York-based financial firms, he added.

Thomas Manes agreed, saying that Sun will have a hard time competing with established ESB vendors. "The ESB market is already confused and overcrowded, and I don't see Sun effectively competing with folks like IBM, BEA, Tibco, Sonic [Software] or even Cape Clear," she said. 55219

Sun's Open-Source Play

PROJECT GLASSFISH: An open-source version of its application server software called the Java System Application Server Platform. Available for download under the Common Development Distribution License.

OPEN-SOURCE ENTERPRISE SERVICE BUS: Will combine Java Message Service and support for Web services standards to help developers build Web services and integrate applications.

Privacy Fears Prompt CVS To Turn Off Online Service

BY TODD R. WEISS

Drugstore chain CVS Corp. has temporarily disabled a feature on its Web site after concerns were raised that unauthorized persons could improperly obtain customer-purchase records via e-mail.

In a statement, Woonsocket, R.I.-based CVS acknowledged that it has turned off the feature that let registered users of its CVS ExtraCare loyalty cards request copies of their purchase data via e-mail and track purchases made under flexible spending accounts (FSA) set up through their employers.

The problem, said Katherine Albrecht, founder and director of the privacy advocacy group Consumers Against Supermarket Privacy Invasion and Numbering, is that anyone can access a cardholder's purchase records if they have the user's 11-digit account number, ZIP code and the first three letters of his last name.

As part of its ExtraCare FSA records, CVS collects and stores data such as the time and date of purchases, the items bought, store locations, universal product codes and customer names, Albrecht said. "The biggest issue is, why does CVS have all this data on the site in the first place?" she added.

Under Review

CVS officials didn't respond to several requests for comment. But in its statement, the company said the online feature was designed to provide customers with "easy access to their own purchase information for purposes of filing FSA claims for over-the-counter items."

The information stored on the Web site doesn't include prescription purchases, nor does it include Social Security or credit card numbers, which could be used for identity theft, CVS added.

"The security procedures implemented to protect information . . . accessed for FSA-related customer needs have been carefully designed, and we believe [they] are effective," the retailer said in the statement. CVS noted that it has received "absolutely no indication" from any cardholders that information has been improperly accessed.

Nevertheless, CVS said it won't restore the FSA-tracking feature until it has developed "additional security hurdles for accessing this purchase information." 55213

Cisco Adds Devices to Form Bridge for Networks, Apps

AON technology goes beyond packets to better support transaction processing

BY MATT HAMBLEN
LAS VEGAS

Beta testers and other potential users of Cisco Systems Inc.'s Application-Oriented Networking (AON) technology last week praised its potential to serve as a secure gateway between different applications, both within corporate networks and for business-to-business uses.

Cisco CEO John Chambers said at the company's Cisco Networkers user conference here that the new message-routing technology was designed to help close the gap between managing applications and networks. He compared the AON rollout to the advent of telephone dial tones, which replaced the manual system of operators plugging in cables to complete circuits. "We're talking about dial tone for apps," Chambers said.

Steve Warford, a network engineer at the Mayo Clinic's facilities in Phoenix, agreed that Cisco's technology could be a major step forward for users. "AON has the potential to change the way we do networking," Warford said.

Rochester, Minn.-based Mayo, formally known as the Mayo Foundation for Medical Education and Research, has about 40,000 network nodes throughout the U.S. The network is usually blamed when end users have system problems, Warford said. But often, an application is at fault, he noted, adding that AON could aid in monitoring and preventing such problems.

Product Plans

Cisco plans to release several AON hardware and software components later this year, including modules for its Catalyst 6500 data center switches and its branch-office routers, plus a stand-alone appliance for networks with equipment from other vendors. The vendor didn't announce pricing for the technology, which goes beyond the data-packet level to provide support for business transactions moving through networks via application-to-application messages.

Kevin Andree, a network engineer at Lehman Brothers Inc. in Jersey City, N.J., said AON could provide a way to transform messages sent via the financial services industry's Financial Information Exchange (FIX) protocol into something more universal, such as XML. "That would be so much easier," he said, adding that transactions would be less complicated to process.

New York-based BT Radianz, which operates a financial services network for 160 brokerages, has been testing AON for 18 months. Chief Technology Officer Brennan Carley said the company recently began working with New York-based software developer TransactTools Inc. to build a managed service that will use AON to manage, monitor and report on FIX messages for customers.

In the past, BT Radianz could provide technical information on data latency and whether bytes of information arrived at the correct locations. But AON will help business managers track whether specific transactions go through, Carley said.

Another beta tester, ManTech International Corp., provides network integration services to U.S. government agencies. ManTech has been working for three months to build a prototype system combining AON with an existing homegrown application that intelligence officials use to control access to data, said Bob Coleman, president of the Fairfax, Va.-based company.

The XML parsing capabilities in AON could give users the means to automatically decide whether a document can be distributed on a network, based on the information's security restrictions, Coleman said. He called AON "complex technology" that will require skilled network technicians to implement but said the investment should be worthwhile.

55214

Cisco Attempts to Outmuscle Rivals

LAS VEGAS

SOME OTHER networking vendors offer equipment with capabilities similar to what Cisco will provide in AON. But none comes close to matching the resources and customer base that Cisco has, said Zeus Kerravala, an analyst at The Yankee Group in Boston.

For network managers who are considering new purchases, the rollout of AON "basically answers the question, 'Why Cisco?' " said Kerravala. "Applications will run better on a Cisco network [with AON]."

Officials at Nortel Networks Ltd., Ciena Corp., DataPower Technology Inc. and Solace Systems Inc. all said last week that their products can compete with AON. Other vendors that offer devices for accelerating the processing of XML messages include Sarvega Inc., Reactivity Inc. and Forum Systems Inc.

But the AON hardware will provide more than XML acceleration capabilities, said Cisco executives. They said the technology will offer users three core functions: multiprotocol message handling, application security and visibility into network events.

The same kind of application-to-application messaging is already supported by middleware sold by a variety of vendors, said Bob Coleman, president of AON beta-tester ManTech International. But AON should lower costs because it lessens the need for separate servers, software licenses and IT administrators, Coleman said.

Despite the overlap with existing middleware, Cisco listed more than 13 software vendors and systems integrators that it's working with to provide AON-based products. They include IBM, which is integrating its WebSphere software with AON, and SAP AG, which is linking the Cisco technology to its Enterprise Services Architecture.

– Matt Hamblen

New Technology Can Translate Between Systems, Exec Says

LAS VEGAS

CHARLES GIANCARLO, Cisco's chief technology officer, spoke with *Computerworld* about the company's new AON technology at last week's Cisco Networkers user conference here. Excerpts from the interview follow:

Some users and analysts are calling AON an XML parsing engine, but it's more than that, correct? People are still trying to figure out exactly where AON fits. [Prospective users] haven't yet gotten to the point of [answering the questions], "How is this going to transform business or industry?" and "How does this work?" Is it an XML engine only? No. XML will be the IP of the message world, but today, the world is largely non-XML. AON really operates very well in the many-protocol world.

Cisco is going to use an AON engine [itself]. We're going to front-end all of our systems with AON to go out and communicate with customers and partners and suppliers. That's happening in the next few months, [but] it may take a couple of years before it's our only interface.

It means our native system can speak in its native language, and our customers' systems can speak in their native languages. Instead of both sides having to have the same language in every case, AON does the universal translation and policy enforcement. That allows the systems to evolve independently.

Network engineers at the conference told me they want more simplicity with networking technology. What is Cisco doing to help with that concern? It's a good question. There are many different aspects to simplicity, just like security. One thing is to make technology easier for the end users of the systems, not just the IT manager. And there are the application [developers and managers], and AON will make their lives easier.

AON won't make the network guys' lives easier because it means another thing for them to deal with. We're [also] focusing on making end users' use of conferencing tools easier, and that again makes more work for the IT guys.

But we also have a responsibility to reduce complexity for IT. There's a balance there. In many ways, part of the reason IT has moved to IP so much is to add flexibility. But because we are flexible, that adds complexity to the system. Complexity is also created by just having lots of different boxes and capabilities. We think as we do a better job of integrating capabilities, we can create some level of simplicity.

– Matt Hamblen

MORE NEWS ONLINE

CEO John Chambers says Cisco will enter new technology markets every three months: **QuickLink 55181**

The state of Arizona has installed 5,000 of Cisco's IP phones at nine agencies:

QuickLink 55192
www.computerworld.com

BRIEFS

IBM Signs $1.6B Outsourcing Deal

IBM has signed a 10-year, $1.6 billion outsourcing contract with energy supplier NiSource Inc., which will transfer 572 employees to IBM or its subcontractors and eliminate another 445 positions over 18 months. NiSource expects to save $530 million in operating and capital costs. IBM will handle NiSource's human resources, accounting, supply chain, customer contact, billing and IT processes.

Seagate to Boost Disk Drive Security

Seagate Technology LLC next year plans to add security technology to some of its hard disk drives that's aimed at keeping notebook PC thieves from reading stolen data. The hardware-based, full-disk Triple Data Encryption Standard technology automatically encrypts all the data written to drives. The technology will ship first as an option on Seagate's 2.5-in. Momentus 5400 series drives.

CA Bundles Tools For Small Business

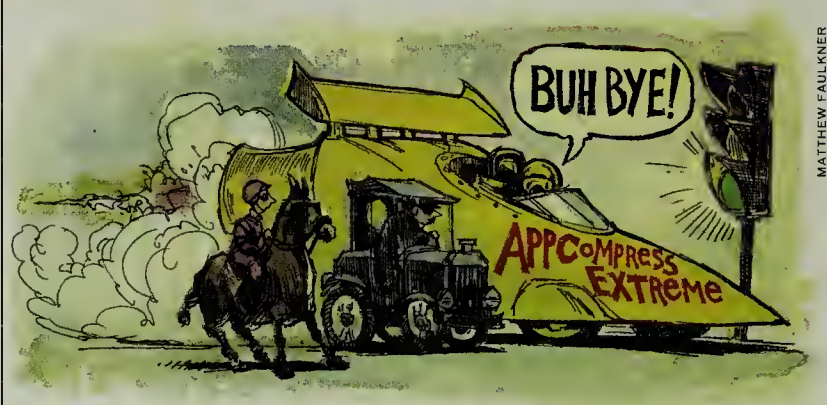
Computer Associates International Inc. is targeting small businesses with five software packages that bundle security, backup and data migration applications. The Protection Suites, to be unveiled next month, combine CA's Desktop DNA Migrator for transferring data and settings between PCs with its eTrust Antivirus, eTrust PestPatrol Anti-Spyware and BrightStor ArcServe Backup applications.

Oracle Set to Ship New 10G Release

Oracle Corp. this week will begin shipping the latest iteration of its Database 10g software, which boosts self-management capabilities and builds on the company's grid computing initiative. A Linux version will ship first, with releases for other operating systems due later in the summer.

ON THE MARK

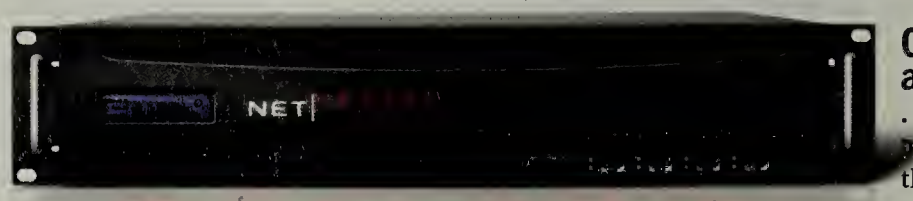
HOT TECHNOLOGY TRENDS, NEW PRODUCT NEWS AND INDUSTRY BUZZ BY MARK HALL



MATTHEW FAULKNER

Prod Web Apps to Run Faster . . .

. . . by cutting the amount of data they send on your network. Greg Smith, senior director of product marketing at San Jose-based NetScaler Inc., argues that pokey Web programs don't have to be so slow if you eliminate the transmission of duplicate data. Not surprisingly, that's exactly what NetScaler's AppCompress Extreme software will do when it ships in Q3 as part of an appliance. (It will also be a nice welcoming gift to Citrix Systems Inc., which is due to complete its acquisition of NetScaler in that quarter.) Smith says AppCompress Extreme "removes redundancy in application content" by sending only the data that has changed to end users requesting information. Based on a Tolly Group report commissioned by NetScaler, tests of the software with a variety of Web-based programs showed that enterprise applications will get the biggest boost in performance. For example, one Oracle app that was tested ran 44 times faster, Smith claims. He says that even Web sites like Google, which is a customer of NetScaler, should see an eightfold jump in response times. Bundled pricing for AppCompress Extreme and NetScaler's hardware will start at around $10,000.



NetScaler will bundle AppCompress Extreme with this appliance.

Technical help from afar seems . . .

. . . to be close to home. That's the theory behind the IT tools developed by 3am Labs Inc. in Woburn, Mass. The company sells the Remotely Anywhere diagnostic tool for help desks and will soon offer an online service called LogMeIn Rescue. Now in beta, LogMeIn Rescue lets a help desk technician manage up to three end-user sessions simultaneously and perform a wide range of diagnostic operations by taking control of remote Windows-based PCs after a small applet is loaded on them. The service should be ready for use in mid-July, and CEO Michael Simon says support for Linux and Macintosh clients will be ready in Q3. Pricing starts at a monthly fee of $99 per help desk staffer. Or, if your computers are rock-solid and your end users are clever enough to solve most of their own problems, you can use a $5-per-incident payment plan.

SIMON: Diagnose PC problems from afar.

Secure your Web code by attacking it . . .

. . . like a hacker would. Cenzic Inc. in Santa Clara, Calif., today plans to release Hailstorm 2.5, which Mandeep Khera, vice president of marketing, calls "a hacker in a box." The software simulates the actions of a hacker trying to sneak past your IT security mechanisms to get to the data in your Web-based programs. In Version 2.5, developers get a wizard view that lets them run "turbo" security checks on code within minutes or "extreme" checks that can take a couple of days to complete. Khera claims that buying the software is much cheaper than using a code-auditing service from a big consultancy, which can take three to six weeks and cost far more than the $15,000 starting price for Hailstorm. For that amount, users can test code from one application with an unlimited number of Web pages for security flaws. Still not convinced? Well, Cenzic also is offering a managed service that will evaluate code on 50 Web pages for about $6,000.

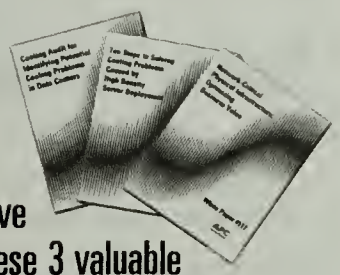
Cheaper Web apps through . . .

. . . the use of Russian programmers. That's the promise of Exadel Inc. in Concord, Calif. CEO Fima Katz says he can save you about a half-million dollars on average if you use his Russia-based development staff and Exadel's open-source technology instead of asking IBM or BEA Systems Inc. to create software for you. Maybe so. Although Exadel lacks the familiar ring of IBM or even BEA inside your executive suite, saving money always strikes a happy chord among business types. Even if that doesn't sway you, your engineers might like to toy around with Exadel Studio Pro 3.0. The company gladly sells the $99 Eclipse-based development environment that its programmers use. Studio Pro 3.0 will hit the streets in early August with a visual JavaServer Pages editor.

KATZ claims big savings in Web app/dev work.

Calm your fears about wireless . . .

. . . security holes by applying centralized policies to all laptops. Kip Meacham, director of product marketing at Senforce Technologies Inc. in Draper, Utah, says his company's Wi-Fi Security Version 3.0 software will let you enforce various security policies on laptop PCs running Windows 2000 and XP. For example, you can disallow a computer connected to your corporate LAN to also have an active Wi-Fi link, a scenario fraught with danger. You can also use the agent-based software to enforce encryption procedures and, if you deem it appropriate, deny wireless connectivity to a laptop even if it has a wireless modem installed. The software is scheduled for release on July 5, and pricing starts at $45 per seat. **55205**



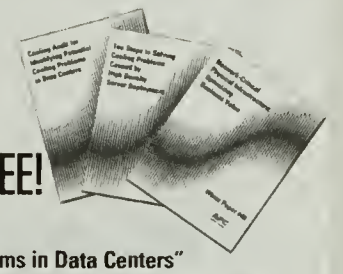
Choose and receive any of these 3 valuable APC white papers within the next 90 days for FREE!

http://promo.apc.com

Key Code
c190x

(888) 289-APCC x3413• FAX: (401) 788-2792

APC®
Legendary Reliability®



Choose and receive any of these 3 APC white papers within the next 90 days for FREE!

- ☐ White Paper #40 **"Cooling Audit for Identifying Potential Cooling Problems in Data Centers"**
- ☐ White Paper #42 **"Ten Steps to Solving Cooling Problems Caused by High Density Server Deployment"**
- ☐ White Paper #117 **"Network-Critical Physical Infrastructure: Optimizing Business Value"**

☐ **YES!** Please send me my FREE white papers ☐ **NO,** I'm not interested at this time, but please add me to your mailing list.

Key Code
c190x

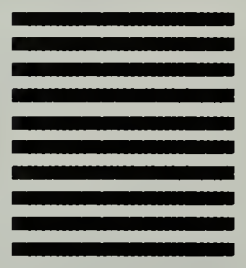
What type of availability solution do you need?
☐ UPS: 0-16kVA (Single-phase) ☐ UPS: 10-80kVA (3-phase AC) ☐ UPS: 80+ kVA (3-phase AC) ☐ DC Power
☐ Network Enclosures and Racks ☐ Precision Air Conditioning ☐ Monitoring and Management
☐ Cables/Wires ☐ Mobile Protection ☐ Surge Protection ☐ UPS Upgrade ☐ Don't know

Purchase timeframe? ☐ < 1 Month ☐ 1-3 Months ☐ 3-12 Months ☐ 1 Yr. Plus ☐ Don't know

You are (check 1): ☐ Home/Home Office ☐ Business (<1000 employees) ☐ Large Corp. (>1000 employees)
☐ Gov't, Education, Public Org. ☐ APC Sellers & Partners

©2005 APC. All trademarks are the property of their owners ISX4A4E8-USe • E-mail: esupport@apcc.com • 132 Fairgrounds Road, West Kingston, RI 02892 USA

NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES



BUSINESS REPLY MAIL

FIRST-CLASS MAIL PERMIT NO. 36 WEST KINGSTON RI

POSTAGE WILL BE PAID BY ADDRESSEE

APC®

KEY CODE: c190x
Department: B
132 FAIRGROUNDS ROAD
PO BOX 278
WEST KINGSTON RI 02892-9920

How to Contact APC

Call: (888) 289-APCC
use the extension on the reverse side

Fax: (401) 788-2792

Visit: *http://promo.apcc.com*
use the key code on the reverse side

APC®
Legendary Reliability®

Introducing data centers on demand

New architecture supports power densities of today... and tomorrow

Hot-aisle Ceiling Tiles/Cable Trough
Seals in hot air, prevents mixing with room air

WINNER 2004 BEST OF INTEROP NETWORLD INTEROP

BLADE READY™

APC solutions that carry the "Blade-Ready" Logo are designed to handle the demanding network-critical physical infrastructure requirements of high-density blade server applications.

Chamber Doors
Access to hot aisle, locks for security

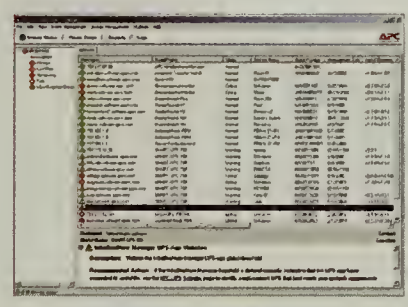
Now you can quickly deploy a standard- or high-density site of any size with scalable, top-tier availability.

Part Number	Usable IT Racks	Average kW per Rack	Price to buy	Price to lease (36 installments)
ISXCR1SY16K16P5	1	up to 5kW	$14,999*	$499**
ISXT240MD6R	6	up to 5kW	$149,999*	$4,999**
ISXT240MD11R	11	up to 5kW	$249,999*	$7,999**
ISXT280MD40R	40	up to 5kW	$699,999*	$21,999**
ISXT2800MD100R	100	up to 5kW	$1,649,999*	$50,999**
High Density Configuration *(shown above)*				
ISXT280HD8R	8	up to 10kW	$399,999*	$12,999**

High density upgrades start at $10,999
On-site power generation options start at $29,999

All multi-rack configurations feature:

- ✓ *N+1 power and cooling*
- ✓ *Secure, self-contained environment*
- ✓ *Peak capacity of 20kW per rack*
- ✓ *Enhanced service package*
- ✓ *Integrated management software*



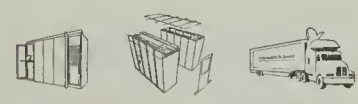
InfraStruXure™ Manager

What is data center on demand?

InfraStruXure™
DATA CENTERS ON DEMAND

Highly available and manageable, quick-to-install, scalable architecture that easily supports both standard- and high-density applications.

- *Up to 20kW a rack for any blade server application*
- *Unlimited racks*
- *Ships in 5 days****
- *Installs in 1 day****
- *Optional on-site power generation*
- *Raised floor not required*
- *Vendor neutral guaranteed compatibility*

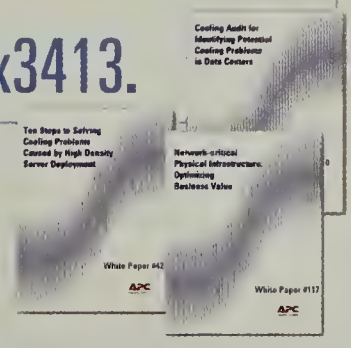


InfraStruXure™ can be purchased as a modular, or mobile system

Order your solution today. Call 888-289-APCC x3413.

Visit today and receive FREE APC White Papers

Visit us online and download APC White Papers.



InfraStruXure™ BuildOut Tool

Don't see the configuration you need?

Try APC's online InfraStruXure™ BuildOut Tool today and build your own solution.

Go to *http://promo.apc.com* and enter key code c190x Call 888-289-APCC x3413

APC® Legendary Reliability®

* Prices do not include IT equipment and are subject to change. ** Indicative rates are subject to market conditions. *** Install and delivery times may vary.

©2005 American Power Conversion Corporation. All trademarks are the property of their owners. E-mail: esupport@apcc.com • 132 Fairgrounds Road, West Kingston, RI 02892 USA ISX4D4EF-USc

Harrah's Bets on Loyalty Program in Caesars Deal

To spend $130M to meld customer rewards efforts and systems, sees big revenue boost

BY THOMAS HOFFMAN

WHILE MOST mergers and acquisitions are undertaken for cost-cutting purposes, Harrah's Entertainment Inc.'s $6.8 billion acquisition of gaming rival Caesars Entertainment Inc. earlier this month was driven largely by revenue opportunities.

Extending Harrah's customer loyalty systems and processes to Caesars clients could help drive 90% of the new revenue expected for the combined firm, said Harrah's executives and industry analysts last week.

Today, roughly 80% of the 200,000 to 250,000 customers who visit Harrah's properties each day are members of its Total Rewards customer loyalty program, while just 30% to 40% of Caesars' customers are enrolled in that company's Connection Card program, said Tim Stanley, senior vice president and CIO at Harrah's.

Combining the companies' rewards programs and processes is part of Harrah's planned $130 million integration of its IT systems with those of Caesars.

MARTIN LE PIRE/KLIXPIX

HARRAH'S CIO TIM STANLEY: Combining loyalty programs should improve per-customer revenue.

The appeal of Harrah's customer loyalty program combined with the company's marketing abilities should enable Harrah's to convince more than half of Caesars' customers to join its Total Rewards program by 2007, said Dennis Forst, a gaming industry analyst at Keybanc Capital Markets, a division of McDonald Investments Inc. in Cleveland.

That could add a few hundred million dollars in revenue to Harrah's coffers, Forst said. Harrah's declined to speculate on the size of potential revenue gains.

Harrah's was the first casino operator to collect and analyze information about customers in order to cater to them individually and thereby capture a greater share of their gaming budgets, said Martha Rogers, founding partner of Peppers & Rogers Group, a Norwalk, Conn.-based customer strategy consulting firm.

Since launching its rewards program in the late 1990s, Harrah's has increased its share of customers' gaming budgets from 36% to 50%, Stanley said. The company expects similar success with Caesars' customers.

Harrah's is one of a handful of companies, including U.K.-based retailer Tesco PLC, that use membership rewards programs to gather personal information about customers so they can cater to their specific needs. That allows those companies to improve customer loyalty and gain new business, said Rogers.

Harrah's stores customer data from its casino floors in its so-called Winners Information Network, an IBM Informix database running on an IBM AIX-based system. A Teradata data warehouse is used to parcel and analyze the data, said Stanley. Harrah's has already mapped customer data from Caesars' DB2 database running on an IBM AS/400 into its data warehouse, and it plans to begin analyzing that data next month (see timeline below).

Harrah's expects the combined systems to strengthen the Total Rewards program's ability to "help us cater the right level of service to the right level of customer" and significantly boost revenue by adding Caesars' most profitable customers, said Stanley.

Some of the $130 million set aside for the systems integration effort is earmarked to support the combined entity's anticipated growth while ensuring higher data availability, Stanley said. The company can meet the latter goal with its recent opening of a new data center in New Jersey, he said. The application and database servers housed there can dynamically fail over to servers at a data center in Memphis. Harrah's expanded IT infrastructure should also help it support its international growth.

But in the end, Harrah's customer loyalty systems will be the linchpin for growth, said David Norton, senior vice president of relationship marketing at Harrah's. **55215**

IT Staff Key to Integration Strategy

WHEN HARRAH'S announced its plans to acquire Caesars last July, Harrah's CIO Tim Stanley and other company executives quickly recognized that the synergies of the deal would be brought about through the integration of the companies' IT systems.

To successfully integrate the operations, officials knew that the casino group had to retain as many IT staffers as possible – on both sides.

So in December, Stanley was authorized to begin communicating frequently with Caesars' 300-person IT staff to discuss his systems integration strategy and convince them to stick around during the process.

The outreach effort included a "road show" that Stanley conducted this spring to discuss the plan with about 180 Caesars IT employees spread across various properties.

During the process, Harrah's developed a retention bonus plan for all Caesars and Harrah's IT workers who stay with the company through the second quarter of 2006. "It's the first time I've ever done that," said Stanley. "Our current Harrah's IT employees should be incented."

Meanwhile, every Caesars IT worker has been offered a position with Harrah's, Stanley said. So far, only 14 out of the 300 or so IT staffers have declined the offer. The combined entity now has 525 corporate IT employees and nearly 400 more who work at its 40-plus properties.

Harrah's IT organization picked up some useful talent from Caesars, including IBM AS/400 specialists who will be critical in supporting the company's midrange operations. "That was a real shot in the arm. AS/400 people are getting harder and harder to find," said Stanley.

Caesars is also contributing many knowledgeable business systems analysts who have five to 20 years of experience in the gaming industry.

– *Thomas Hoffman*

Harrah's/Caesars Systems Integration Plan

NETWORK CONSOLIDATION: Transitioned all Caesars properties onto Harrah's WANs and LANs, telephone routing, call center and e-mail systems, and file- and print-sharing services. **Completed June 14**

REVENUE MANAGEMENT SYSTEM: Combined Manugistics application now used by both firms is to be available to all properties by **year's end.**

SLOT MANAGEMENT SYSTEM: Harrah's Bally Gaming and Systems application is to be installed at Caesars' Las Vegas properties in **November/December 2005,** at Atlantic City facilities in **January 2006,** at sites in Mississippi in **February/March 2006,** and in Indiana locations in **late March/early April 2006.**

TABLE TRACKING SYSTEM: Caesars' International Game Technology system is to be integrated with Harrah's casino management system and rolled out to Harrah's properties by **spring 2006.**

PLAYER CONTACT SYSTEM: Harrah's internally developed system is to be installed at Caesars' sites alongside the Slot Management system.

DATA WAREHOUSES: Customer data from Caesars' AS/400-based DB2 database has been mapped into Harrah's IBM AIX/Informix database and its Teradata data warehouse. Harrah's plans to begin analyzing that data **next month.**

CASINO MANAGEMENT SYSTEM: Caesar's facilities are to be moved to Harrah's customized system at the time of the Slot Management system transition.

LODGING MANAGEMENT SYSTEM: The plan is to migrate Caesars onto Harrah's newly customized platform according to the same schedule as the Slot Management system transition.

BACK-OFFICE SYSTEMS: The plan is to combine Harrah's and Caesars' customized SSA Global Technologies systems (e.g., HR, payroll, accounts payable and general ledger) by **year's end.**

MEANS MORE POWER MORE AFFORDABLY.

ProCurve Networking by HP offers a range of affordable gigabit-enabled switches that is second to none. That means you can get better performance from your network along with better performance from your networking dollars. Downloads that used to take minutes can now be done in seconds. And you can do it for cents. Not dollars. That's high-availability gigabit performance at the edge—not just the core of your network. What's more, ProCurve gigabit-enabled switches are backed by a lifetime warranty*—perhaps the best in the industry. More affordability. More choice. More productivity.

Find out how to get the power of gigabit for less.
Visit **www.hp.com/networking/gigabit** for our latest gigabit promotions.

HP PROCURVE SWITCHES:
2800, 3400, 4100 AND
5300 SERIES

- Open standards enabling interaperability ond ease of integration
- Flexibility of stackable or chassis configuration
- Lifetime warranty*
- Low cast of ownership
- Legendary service and support

ProCurve Networking
HP Innovation

CLICK **www.hp.com/networking/gigabit** CONTACT **your local HP reseller**

*Lifetime warranty applies to all ProCurve Products, excluding the ProCurve routing switch 9300m Series and Secure Access 700wl Series, which have a one-year warranty with extensions available.
©2004 Hewlett-Packard Development Company, L.P

BRIEFS

Microsoft Offers SP1 Blocking Tool

Microsoft Corp. is offering users a tool kit that temporarily blocks the delivery of Windows Server 2003 Service Pack 1. Microsoft created the tool kit for customers who want to hold off on delivering SP1 to their servers. The tool disables the delivery of SP1 to subscribers of Automatic Updates, Windows Update and Microsoft Update, the company said.

BEA to Double India R&D Staff

BEA Systems Inc. has disclosed plans to double the number of employees at its research and development center in Bangalore, India, over the next year. The facility now employs about 180 staffers. The center is involved in the development of key BEA products, including its WebLogic server and its new AquaLogic line of infrastructure products for managing service-oriented architectures.

Google Is Building E-payment System

Google Inc. confirmed that it's developing an online payment system, although it says that it has no plans to take on eBay Inc.'s rival PayPal service. CEO Eric Schmidt said Google is working on payment services that would extend its existing online products and advertising services. The goal is to improve the way e-commerce is done, he said.

SAP Agrees to Buy Application Vendor

SAP AG has agreed to acquire Lighthammer Software Development Corp. to boost its expertise in manufacturing applications. SAP plans to develop "adaptive manufacturing" technology to deliver real-time transactional integration between ERP and plant-floor systems as well as unified, real-time analytics. Terms of the deal weren't disclosed.

MPE Users Act While HP Mulls Code Issue

Many e3000 shops have already made the call on whether they will migrate

BY PATRICK THIBODEAU

HEWLETT-PACKARD Co. said last week that it will update users on the future of the operating system source code for its HP e3000 hardware in the fourth quarter. But for many users of the discontinued minicomputer line, the decision will likely be moot.

"The way HP has dragged its feet with this, it's almost a nonissue," said Connie Sellitto, who manages an e3000 for The Cat Fanciers Association Inc. in Manasquan, N.J. "Most of the people who may need new features have already decided to migrate, and the rest of us are just going to ride the system as long as we can."

HP stopped selling the e3000s in 2003 and plans to halt support at the end of 2006. Some users and third-party support firms asked HP early last year to release the source code for its MPE operating system so they could keep developing the technology.

Homesteading

While many users have made migration plans, some will "homestead," choosing to run their existing machines past the end-of-support date. Having the MPE source code could help companies that want to add drivers and other functionality to their systems, said Steve Cooper, president of Allegro Consultants Inc. in San Jose. Allegro is one four e3000 consulting firms that formed a consortium earlier this year to provide third-party support.

OpenMPE Inc., a user advocacy group in Hagerstown, Md., has been in talks with HP on the issue. Birket Foster, a consultant who is also OpenMPE's chairman, referred questions to HP.

HP had said that it wouldn't decide whether to release the source code until the second half of this year. In a written response last week, David Wilde, HP's e3000 business manager, narrowed that time frame to near the end of the year. He also said HP has "met and exceeded" its road map commitments for enhancements and patches as part of the e3000's end-of-life phase.

Terry Simpkins, IT manager at Measurement Specialties Inc. (MSI), said the Hampton, Va.-based sensor manufacturer intends to remain on the e3000 for at least five more years. MSI runs an ERP system that was written for the e3000 by SSA Global Technologies Inc. and supports about 600 users worldwide.

> **"My real impression is that HP is just stalling and hoping that everybody just kind of goes away."**
>
> **REX DICKEY**, IT DIRECTOR AND FORMER E3000 USER, COLUMBIA STEEL CASTING CO.

Migrating would create "a huge disruption," said Simpkins, who noted that he's confident his staff can keep MSI's e3000 running. Simpkins is unhappy with HP for discontinuing the system. But if HP officials decide to release the MPE source code, "it would garner them much more goodwill with our company," he said.

One user that didn't wait for HP to decide whether to make the MPE source code available is Columbia Steel Casting Co. in Portland, Ore. In April, it completed a migration of its custom-built, Cobol-based business systems to HP 9000 hardware running HP-UX and a third-party MPE emulator.

"You can't just wait around forever for HP to make up their mind what they're going to do," said Rex Dickey, Columbia Steel's IT director. "My real impression is that HP is just stalling and hoping that everybody just kind of goes away." **55221**

Sniffing of TCP Port Could Herald Attack, Gartner Says

Targeted port is tied to patched Microsoft protocol

BY JAIKUMAR VIJAYAN

An increase in sniffing activity on a communications port associated with a software vulnerability disclosed by Microsoft Corp. this month may be the signal of an impending attack designed to exploit the flaw, according to an alert from Gartner Inc.

The remote code-execution vulnerability affects the Windows Server Message Block (SMB) file-sharing protocol. In its monthly patch release two weeks ago, Microsoft gave the SMB hole a "critical" severity rating because attackers could use it to take control of unprotected systems.

Gartner analyst John Pescatore said in an alert posted on the consulting firm's Web site last Tuesday that the increased sniffing detected on TCP Port 445 poses "a serious concern for enterprise security managers, because it may indicate an impending mass malicious-code attack." The sniffing activity indicates that attackers may have reverse-engineered Microsoft's SMB patch, developed exploit code and circulated it on the Internet, Pescatore said.

Monitors at Symantec Corp. also spotted the increased activity on Port 445, but they downplayed any immediate threat to corporate systems.

Alfred Huger, senior director of engineering at Symantec, said the Cupertino, Calif.-based company noticed a "significant spike" in sniffing on June 17. Since then, though, activity levels have gone back to normal, according to Huger.

Background Noise

"Activity targeting Port 455 is very common. It's almost like background noise," Huger said. He added that the spike probably indicated an attempt to find vulnerable systems.

"The good news is that the vast majority of enterprises don't allow access to this port," he said. Companies that have installed Windows XP Service Pack 2 should already be protected because that version of the operating system closes off access to Port 445 by default, Huger said.

Pescatore said companies need to accelerate system patching, implement recommended work-arounds and ensure that access to Port 445 is blocked where possible. It's also a good idea to update both network and host-based intrusion-prevention filters to deal with the threat, he said.

A Microsoft spokeswoman said the software vendor is aware of public reports about increased sniffing on Port 445. But it doesn't necessarily relate to the SMB flaw, she said. "Port scanning is an activity that may be indicative of an attempt to discover attack vectors against any vendor product and is not an activity unique to Microsoft products," the spokeswoman said. She added that Microsoft had yet to receive any reports of the flaw being exploited. **55208**

NETWORK
The largest and fastest national wireless data network. The largest U.S. provider on the global standard.

EXPERTISE
Our people and partners make wireless work for more businesses than any other wireless carrier.

APPLICATIONS
The broadest and deepest portfolio of wireless business solutions.

SERVICE
24/7 enterprise-grade support. And a service staff dedicated solely to business people.

this very second helped FedEx deliver absolutely, positively faster.

Cingular connected the FedEx Ground package tracking system to the ALLOVER™ network, the largest digital voice and data network in America. FedEx customers can now track their packages online in real-time. With its advanced network, Cingular provides greater efficiency to its customers and even greater satisfaction to theirs.

CINGULAR MAKES BUSINESS RUN BETTER

cingular
raising the bar™

Find out how Cingular can make your business run better:
CALL your account representative -or- **CLICK** cingular.com/businessleader

Cingular's ALLOVER data network covers over 250 million people and is growing.

Coverage is not available in all areas. Global coverage based on coverage in 174 countries. Fastest claim compares Cingular's measured speed of its EDGE network to other carriers' speed claims for their national data networks. All marks property of their respective owners. ©2005 Cingular Wireless. All rights reserved.

GLOBAL DISPATCHES

An International IT News Digest

Sailors Will Be Issued Biometric Identity Cards

GROUPE STERIA SCA, a Paris-based IT services firm, last week announced that it has won approval from the International Labour Organization (ILO) to be a supplier of biometric ID cards for 1.2 million sailors arriving at world ports.

The Seafarers' Identity Documents Convention, an ILO treaty that went into effect Feb. 9, calls for countries to replace their maritime certificates with biometric cards that convert the cardholder's fingerprint into a two-dimensional bar code. To confirm a cardholder's identity, the individual places his finger on a scanner, which then verifies whether his fingerprint matches the one represented by the bar code.

Two other biometric technology vendors are on the ILO's approved list of card suppliers: Sagem Morpho Inc. in Tacoma, Wash., and Hyundai Information Technology in Seoul.

The program, which is intended to boost security at ports and allow sailors to take shore leave without visas, requires global interoperability, meaning that the fingerprint bar codes issued in one country must be readable by equipment used in other countries.

GLOBAL FACT

2025

Year that the Japan Aerospace Exploration Agency wants to place humanoid robots on a lunar base.

SOURCE: IDG NEWS SERVICE

More Aussies Going Online for E-Government

SYDNEY

THE USE OF online government services by Australian citizens has nearly doubled over the past two years, with taxpayers increasingly preferring to do business over the Web rather than use the telephone or stand in line at local agency offices, according to a study released by the Australian Government Information Management Office last week.

The survey of 5,846 Australians found that use of e-government services jumped from 21% in 2002 to 39% in 2004. For example, close to 100% of vehicle license renewals in the state of Victoria are now done electronically, said John McNally, CIO of VicRoads, the state's transportation agency.

Asked why they prefer the Web, 42% of the e-government users said they like the convenience of being able to do business at a time that suits them. Another 37% said the online services take less time than conventional means.

■ JULIAN BAJKOWSKI, COMPUTERWORLD TODAY (AUSTRALIA)

Amdocs Enters China With Two Transactions

SHANGHAI

HEWLETT-PACKARD CO. and billing software vendor Amdocs Ltd. have joined forces to supply a billing system to cellular network operator Beijing Mobile Communications Corp. in China, Amdocs announced last week. Financial terms of the contract weren't disclosed.

Also last week, Amdocs announced a $30 million deal to acquire Longshine Information Technology Co., a Beijing-based vendor of billing and customer care software.

Chesterfield, Mo.-based Amdocs said that it will use the acquisition of Longshine to establish a presence in China and begin selling its own billing applications to Chinese customers. **55204**

■ SUMNER LEMON, IDG NEWS SERVICE

Compiled by Mitch Betts.

Briefly Noted

The U.S. Department of Homeland Security announced this month that it will delay by a year the deadline for 27 countries that participate in its visa-waiver program to issue passports with biometric identification. The deadline, which European countries said they couldn't meet [QuickLink 53624], was moved to Oct. 26, 2006.

■ MARTYN WILLIAMS, IDG NEWS SERVICE

Microsoft Corp. last week named a new head of international operations, underscoring its interest in global sales and emerging markets. The software maker promoted Jean-Philippe Courtois to president of Paris-based Microsoft International and named him a senior vice president of the parent company.

■ SCARLET PRUITT, IDG NEWS SERVICE

The Emirate of Abu Dhabi last week announced that it has selected Cerner Corp. in Kansas City, Mo., as its health care IT provider. Initially, Cerner is expected to implement electronic medical records at four hospitals. Financial terms weren't disclosed.

SCO Upgrades OpenServer In Bid to Keep OS Relevant

BY STACY COWLEY
NEW YORK

The SCO Group Inc. is in the headlines more often for its legal battles than for its products these days. But last week, the software vendor wrapped up three years of development work and began shipping a major update of its Unix operating system.

The SCO OpenServer 6 software, code-named Legend, has been in beta-testing since last year and was originally scheduled to ship in this year's first quarter. But its completion date slid a bit, a SCO spokesman acknowledged.

The update is intended to modernize OpenServer, which is aimed at small and midsize businesses. OpenServer 6 supports file sizes up to 1TB, increases memory support from 4GB to 64GB and adds an IP firewall filter and several other security features.

Performance enhancements were also a major focus during the development process, according to SCO. During a launch event held at Yankee Stadium here, company executives said their benchmark tests showed the new version running two to three times faster than the previous release, OpenServer 5.0.7. That's partly because of the addition of support for multithreaded applications through the integration of the kernel from SCO's separate UnixWare operating system.

Lindon, Utah-based SCO is fighting to stay relevant in the server operating system market. The company saw its annual revenue sink to $42.8 million in the fiscal year that ended in October, down 46% from the previous year.

Meanwhile, SCO's highly publicized lawsuit against IBM, in which it is accusing that vendor of violating its Unix copyrights as part of Linux-related development work, is costing SCO millions of dollars each quarter. As of April 30, the company was down to $14.2 million in cash and liquid assets, having used $17.7 million over the prior six months.

But Stan Hubble, a technical specialist at Home Hardware Stores Ltd. who attended the OpenServer 6 announcement, said he's unfazed by SCO's financial and legal issues. Hubble works on development of a custom inventory management application used by about 350 of the St. Jacobs, Ontario-based retailer's 1,100 independently operated stores in Canada. The 15-year-old application runs on OpenServer.

Hubble said Home Hardware's store operators haven't been clamoring for advances in the operating system but will likely appreciate the new version's capabilities. He added that he expects upgrade decisions to be driven by hardware life cycles.

Deepak Thadani, president of Woodside, N.Y.-based SCO reseller SysIntegrators LLC, predicted strong demand for OpenServer 6 upgrades. "The large file system support is the big thing," he said. "That was a real limitation on OpenServer 5."

Thadani said he also thinks the new software will appeal to some Linux users who might achieve lower operating costs by migrating. Like Hubble, Thadani doesn't consider SCO's corporate issues to be a problem for users. "If I tell my customers, 'This is the right way to go,' they trust me," he said. **55211**

OS Upgrade

SCO OpenServer 6

- Supports 16GB of general-purpose memory and a total of 64GB, including memory dedicated to specific applications.
- Runs on systems with up to 32 processors, up from the previous limit of four CPUs.
- Offers users a KDE3-based desktop in addition to the standard OpenServer interface.
- Adds support for the OpenSSH, OpenSSL and IPsec security technologies.
- Pricing starts at $1,399 for a 10-user Enterprise Edition license.

Innovations by InterSystems

Multidimensional Database Combines Robust Objects And Robust SQL.

Imagine being able to rapidly develop applications that run much faster, with massive scalability.

Now you can, with our multidimensional database for transaction processing and real-time analytics.

Only Caché combines robust objects and robust SQL, thus eliminating object-relational mapping. It requires little administration, delivers speed and scalability on minimal hardware, and comes with a rapid application development environment.

These innovations mean faster time-to-market, lower cost of operations, and higher application performance. We back these claims with this money-back guarantee: *Buy Caché for new application development, and for up to one year you can return your license for a full refund if you are unhappy for any reason.**

Innovative database. Guaranteed performance.

InterSystems CACHÉ™

Rapid Integration Platform Makes Applications Perform In Concert.

Imagine being able to get your applications to perform together as an ensemble. Easily.

Now you can, with our universal integration platform.

Ensemble is the first fusion of an integration server, data server, application server, and portal development software – in a single, seamless product. This is the complete ensemble of technologies needed for rapid integration, fast development, and easy management.

These innovations mean all of your integration projects will be completed on time and on budget, with a simplified learning curve for your IT staff. We back these claims with this money-back guarantee: *For up to one year after you purchase Ensemble, if you are unhappy for any reason, we'll refund 100% of your license fee.**

Innovative integration. Guaranteed performance.

InterSystems ENSEMBLE™

For a free copy of CACHÉ, or to request a free ENSEMBLE proof-of-concept project, visit **www.InterSystems.com/Free5A**

*Read about our money-back guarantees at the web page shown above.

© 2005 InterSystems Corporation. All rights reserved. InterSystems Caché and InterSystems Ensemble are trademarks of InterSystems Corporation. 6-05 ComboInno5CoWo

Continued from page 1

Attacks

That's because "the cons in the attacks are so much better customized" for the specific companies they target, said Lloyd Hession, chief information security officer at BT Radianz, a New York-based provider of telecommunications services to the financial industry. "The chances of them being successful are much higher" than in large-scale attacks, he said.

MasterCard International Inc. on June 17 disclosed the security breach at CardSystems Solutions Inc., a provider of payment services for credit card companies [QuickLink a6230]. The hacking incident exposed up to 40 million credit cards to the hackers, MasterCard said.

A malicious script placed in a computer that stored data at a CardSystems facility is believed to have been used to steal the data.

The breach was seen by security experts as further evidence of a growing trend away from mass-mailing worms and viruses to more-tailored attacks directed against specific high-value targets.

Because such targeted attacks generate much less traffic than mass attacks, they are a lot harder to detect using traditional antivirus and e-mail filtering tools, said Matt Kesner, chief technology officer at Fenwick & West LLP, a law firm in Mountain View, Calif.

"The problem is that the antivirus, antispam and firewall companies are all geared to respond to major outbreaks that hit tens of thousands of computers," Kesner said. A smaller attack, he added, "may not be noticed by those vendors. That leaves most companies very vulnerable."

Often, the attackers use social engineering tricks — via spoofed e-mails and Web sites — to get users to unknowingly install malicious code. Targeted messages are also used to get users to part with IDs and passwords that are then used to gain access to critical systems and information, said Jason Jones, a webmaster at a private university in Texas that he asked not be named.

Targeted Attacks

The CardSystems breach is only the latest attack involving Trojan horse programs.

- In May, law enforcement authorities in Israel unearthed a massive industrial espionage ring that involved several companies stealing confidential information from rivals using Trojan horse programs installed on their behalf by three private investigation agencies.
- In June, the U.K.'s National Infrastructure Security Co-ordination Centre disclosed that more than 300 government agencies and critical infrastructure businesses were being targeted by a continuing series of e-mail attacks.

In a test, Jones and his team at the university successfully collected authentication credentials from over 90% of targeted individuals by using spoofed e-mail and Web pages designed to look like they were from the university's IT security team.

"The credentials were enough for us to remotely gain access to all of the data we wanted, completely undetected," he said.

Dealing with targeted hacking "very much requires an in-depth defense" strategy, said Kevin Houle, senior member of the technical staff at Carnegie Mellon University's CERT Coordination Center.

Apart from ensuring that antivirus signatures, patches and e-mail filters are updated, it's also key for IT operations to implement tools for detecting anomalous network behavior, Houle said. "What we are advocating is the ability to go out and look for patterns on the network," he said.

Knowing what's going out of the network is as important as keeping track of what's coming in, so it's a good idea to implement egress-filtering tools, Hession said. Similarly, database-level access-monitoring and encryption can help mitigate the impact of such targeted attacks, analysts and users said. **55220**

Users Want Pragmatic Security Rules

THE MASSIVE SCOPE of the CardSystems Solutions security breach earlier this month is likely to fuel even more calls for new data-protection regulations and tougher enforcement of existing ones, security managers said last week.

But they cautioned that any proposed measures need to be tempered with pragmatism.

"I'm personally concerned about a knee-jerk reaction," said Karen Worstell, chief information security officer at Microsoft Corp. While guidelines for protecting specific systems are acceptable, "I don't want the government to prescribe technology fixes," she said.

"Intervention is good," said Rich Baich, CISO at ChoicePoint Inc., an Alpharetta, Ga.-based data aggregator that disclosed a major data compromise earlier this year. "But the toughest part about legislation right now is you don't know where it's coming from and you don't know what to expect."

Baich noted that state and federal legislation could conflict, causing headaches for IT operations. "Hopefully, we'll see some sort of federal guidelines," he said.

It's also impractical to mandate specific technical fixes without accounting for different classes of data or where it may exist, said a global information security director at a financial services firm who spoke on condition of anonymity.

All the same, it's very likely that the spate of incidents will renew calls for new data-protection controls, he said. In fact, expect to see such controls being mandated both internally and in situations where companies may be outsourcing key processes to third parties. From a due-diligence standpoint, it's a good idea to put controls in place for monitoring activity on the service provider network, the security director added.

The CardSystems incident will likely also lead to tougher enforcement of industry rules that require that companies managing credit card information comply with the Payment Card Industry (PCI) data security standard that's being pushed by the major credit card vendors [QuickLink 53943], analysts said. The deadline for PCI compliance is Thursday.

"The PCI standard is germane to every entity that handles cardholder information," said Michael Petitti, a senior vice president at AmbironTrustWave, a Chicago-based provider of security services for the credit card industry.

Achieving and maintaining compliance with the rules – which are already in effect for large companies – will become an absolute must, Petitti said.

– Jaikumar Vijayan

Kaiser Permanente Fined $200k for Patient Data Breach

THE CALIFORNIA Department of Managed Health Care (DMHC) has fined Kaiser Foundation Health Plan Inc., a division of Kaiser Permanente, $200,000 for exposing the confidential health data of about 150 people.

The DMHC said the data had been available on a publicly accessible Web site for as long as four years.

"Patients must be assured that health plans will, at all costs, do everything possible to protect confidential information," Cindy Ehnes, director of the DMHC, said in a statement. "Health plans must make security of confidential information a top priority."

An investigation by the agency found that Kaiser created a systems diagram Web site used as a testing portal by its IT staff. The site contained confidential patient information, including names, addresses, telephone numbers and lab results.

The DMHC said it was concerned that Kaiser allowed the Web site to languish in an accessible format and didn't act to remove it until the site was brought to the attention of federal civil rights officials in January.

In addition, Kaiser authorities didn't inform state regulators until March, the DMHC said. Oakland, Calif.-based Kaiser has since informed all of its affected members about the incident.

"Not only was this a grave security breach, Kaiser did not actively work to protect patients until after [it] had been caught," said Ehnes.

"We have fully cooperated with the department and accept their ruling in this matter," Matthew Schiffgens, director of issues management at Kaiser Foundation Health Plan, said in an e-mail statement. He said that the site has been taken down and that "we are currently conducting a full audit of all Web sites."

Berkeley, Calif., resident Elisa Cooper, a former Web coordinator at Kaiser Permanente, brought the breach to the attention of federal regulators last year and posted a link to the Kaiser Web site on her weblog. Kaiser then sued her for invasion of privacy and breach of contract. That case is still pending.

The DMHC ordered Cooper to stop posting the link, which she did, according to a DMHC spokeswoman. "Her case is now closed," she said.

"I'm relieved that the DMHC has formally confirmed that Kaiser was responsible for posting the systems diagrams Web site," Cooper said in an e-mail.

Kaiser officials, who have been cooperating throughout the investigation, have until June 25 to present any information to dispute the state agency's findings and avoid having to pay the fine, the DMHC said.

– Linda Rosencrance

The Intel® Itanium®2 platform makes the HP Integrity NonStop Server even more reliable.

Downtime is on the verge of extinction, thanks to HP's latest generation of mission-critical servers. Based on Intel Itanium 2 processors—Intel's highest-performing and most reliable server platform—the HP Integrity NonStop server now has an unprecedented 99.99999% reliability.* In fact, NonStop is the number one server in the world's stock exchange trade processing, ATM transaction switching and 911 emergency call handling.* Be afraid, downtime. Be very afraid.

Reliability based on Q2 2004 Standish Group Quarterly Report, ©2004 Standish Group International Inc. *Based on HP-provided data.

©2005 Intel Corporation. Intel, the Intel inside logo and Itanium 2 are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries. All rights reserved. All trademarks are the property of their respective owners.

Got Questions About Enterprise Data Analytics?

Computerworld's IT Management Summit Has the Answers

Looking to better understand enterprise analytics? Apply to attend Computerworld's complimentary* half-day IT Management Summit: Beyond Business Intelligence.

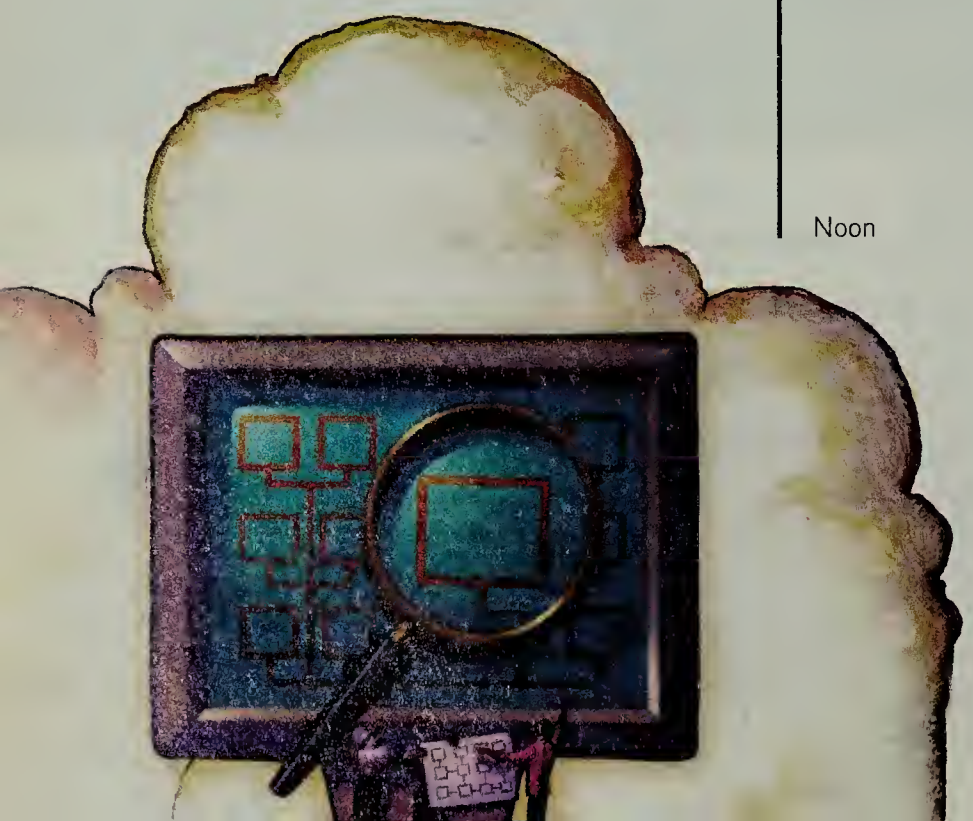
Enterprise analytics enable companies to make timely fact-based decisions using critical information from across the entire organization. By fully leveraging data, technology, skills and processes, successful users of enterprise analytics go beyond simply understanding the past, to predicting outcomes that improve overall corporate performance.

This summit will feature the latest insights of business intelligence industry experts and will give you first-hand information on the innovations and experiences of companies successfully deploying enterprise analytics.

* Complimentary registration is restricted to qualified IT managers only.

Apply for registration today

Contact Chris Leger at 888-299-0155
or visit: **www.itmanagementsummit.com**



Beyond Business Intelligence: Using Enterprise Analytics to Drive Fact-Based Decisions

Washington, D.C. · July 12, 2005

Marriott Bethesda North Conference Center · 5701 Marinelli Road · North Bethesda, Maryland

7:45am to 8:15am	Registration and Networking Breakfast
8:15am to 8:25am	**Introduction and Overview** Julia King, Executive Editor, Events, and National Correspondent, Computerworld
8:25am to 8:55am	**Trends in Enterprise Analytics: An Industry Analyst's Overview** Keith Gile, Principal Analyst, Forrester Research
8:55am to 9:25am	**Case Study: United States Census Bureau** Blake Sanders, Branch Chief of System Design and Support, Foreign Trade Division, United States Census Bureau
9:25am to 10:15am	**How Technology is Transforming Business Intelligence** Rob Stephens, Director, Technology Strategy, SAS Michael Tillema, Business Intelligence Strategist, Intel
10:15am to 10:45am	Refreshment and Networking Break
10:45am to 11:15am	**Case Study: The Nature Conservancy** Connor Baker, Director of Business Information, The Nature Conservancy
11:15am to Noon	**Panel Discussion – From Gut Feel to Fact-Based Decisions: Real-Life Business, Political and Technology Lessons Learned on the Front Lines of Enterprise Analytics** Moderator: Julia King, Executive Editor, Events, and National Correspondent, Computerworld Panelists: · Blake Sanders, Branch Chief of System Design and Support, Foreign Trade Division, United States Census Bureau · Connor Baker, Director of Business Information, The Nature Conservancy · Keith Gile, Principal Analyst, Forrester Research · Rob Stephens, Director, Technology Strategy, SAS · Michael Tillema, Business Intelligence Strategist, Intel
Noon	Program Concludes

Exclusively sponsored by

sas® The Power to Know.

intel®

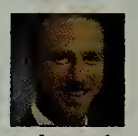
SAS and all other SAS Institute Inc. product or service names are registered trademarks or trademarks of SAS Institute Inc. in the USA and other countries. ® indicates USA registration. Other brand and product names are trademarks of their respective companies. Intel and the Intel logo are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries.

Selected speakers include:

Connor Baker
Director of Business Information, The Nature Conservancy

Blake Sanders
Branch Chief of System Design and Support, Foreign Trade Division, United States Census Bureau

Keith Gile
Principal Analyst, Forrester Research



Rob Stephens
Director, Technology Strategy, SAS

Michael Tillema
Business Intelligence Strategist, Intel

Julia King
Executive Editor, Events, and National Correspondent Computerworld

This program will also take place in:

Chicago, Illinois
July 26, 2005

New York, New York
August 9, 2005

San Francisco, California
September 20, 2005

COMPUTERWORLD
IT MANAGEMENT SUMMIT
SERIES

E-voting Paper-Trail Hopes Hit Roadblock

BY GRANT GROSS

Calls for the U.S. government to require that electronic voting machines produce voter-verified paper trails ran into opposition from two members of a Senate committee during a hearing on e-voting last week.

Voting accuracy advocates and some lawmakers have repeatedly called for printers to be attached to e-voting machines to ensure their accuracy [QuickLink 52869].

Five bills introduced in Congress this year would require voter-verified paper ballots with direct electronic recording (DRE) machines.

But Sen. Trent Lott (R-Miss.), chairman of the Senate Rules and Administration Committee, said that attaching printers to DREs could cause equipment problems. "It seems we're adding a level of complexity," he said.

Sen. Christopher Dodd (D-Conn.), the committee's ranking Democrat, argued that a paper-only system couldn't be used by some disabled people. "By insisting on paper, you're denying people who cannot read because they cannot see," said Dodd, who has introduced a bill that would require a choice of paper, audio or visual verification.

Reassuring Voters

DRE paper trails would reassure voters that ballots are being counted correctly, supporters say. Sen. John Ensign (R-Nev.) said his state used DRE ballots during the 2004 election and they were widely accepted, he said.

"There is no way to build a completely secure electronic system," Ensign said. "All I'm trying to do is make sure the machines are kept honest."

Two computer scientists disagreed over the effectiveness of voter-verified paper-trail ballots. DREs are tested before and after elections, and election officials have better forensic tools to find errors on DREs than on other types of ballots, said Ted Selker, chairman of the CalTech/MIT Voter Technology Project.

David Dill, a computer science professor at Stanford University, said that without verification, voters have no idea of what's going on inside a DRE. "It's not good enough for elections to be accurate; the public has to know that they're accurate," he said.

Los Angeles County has had no problems with DREs since it began using them in 1999, said Conny McCormack, registrar-recorder and county clerk.

"The fact is, the existing DRE systems without the paper trail have a proven track record," she said. 55194

Gross is a reporter for the IDG News Service.

YOUR INFRASTRUCTURE MAY PROTECT EMPLOYEES INSIDE.

What protects employees outside?

She works from home. She works from the road. And she endangers the network everywhere she goes. That's why you need Websense software—to provide security protection at the desktop and beyond. Close the security gap. Download your free evaluation today. www.websense.com/mobile7

WEBSENSE.
SECURING PRODUCTIVITY™

© 2005 Websense, Inc. All rights reserved. Websense is a registered trademark of Websense, Inc. in the United States and certain international markets.

INNOVATIVE DELL™ POWEREDGE™ SERVERS FEATURE THE PERFORMANCE AND RELIABILITY OF INTEL® XEON™ PROCESSORS.

Dell cannot be responsible for errors in typography or photography. Dell, the Dell logo and PowerEdge are trademarks of Dell Inc. Intel, Intel Inside, the Intel Inside logo, and Intel Xeon are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries. © 2005 Dell Inc. All rights reserved.

ANY ENTERPRISE PARTNER CAN SAVE YOU MONEY FOR A DAY. BUT HOW ABOUT A DECADE?

NOW IS THE TIME TO

partner with Dell, a proven leader in designing enterprise solutions that add more flexibility, help simplify operations, and scale every IT dollar. Everything from PowerEdge Server technology with the performance and reliability of Intel® Xeon™ Processors, to complete storage solutions and end-to-end services for planning, implementing and managing your data center. All direct from one place. Get more out of the next decade and

GET MORE OUT OF NOW.

DELL

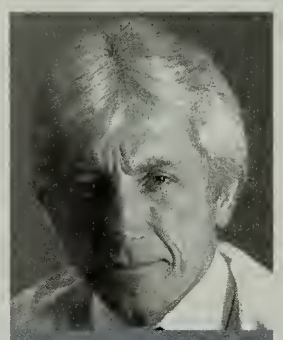
For more about Dell solutions
Click www.dell.com/enterprise4
Call (toll free) 1.877.434.DELL

intel inside
XEON

DON TENNANT

Best Lessons

WHEN I READ OVER this year's list of the 100 Best Places to Work in IT, two things struck me. First, having had the good fortune of meeting many of the CIOs of those companies, I could have guessed that they'd be on the list. You can't meet someone like Cora Carmody of SAIC (No. 77) or Kim Perdikou of Juniper Networks (No. 50) without being so impressed that you're convinced the people who work for them must absolutely love their jobs.



DON TENNANT is editor in chief of *Computerworld*. You can contact him at don_tennant@computerworld.com.

Second, these IT organizations tend to share a global outlook that highly values the contributions of IT workers not only within the U.S., but overseas as well. Perdikou, for example, is an outspoken proponent of maintaining a hiring strategy that's not constrained by national borders [QuickLink 53066]. "Companies for years have said that they were global, and all that meant is that they had offices all over the world," says Perdikou, who's responsible for driving Juniper's international operations. "They did not interact and gain from being global."

The same strategy is championed by Sherry Aaholm, senior vice president of express and freight solutions at the FedEx Services arm of FedEx Corp. (No. 12). "Our Memphis folks can't understand or appreciate the magnitude of the challenges we have in the international locations," Aaholm says. "So when we want to build a global app, it's extremely important that I bring in my technology resources that are sitting in Asia, Europe, Latin America or Canada. They bring the flavor for what you need to appreciate and understand."

This appreciation for the contributions of the foreign members of IT teams, whether they reside overseas or have relocated to the U.S., is apparent in the stories that make up our Best Places special report, which begins on page 25. Ruth Diaz, an applications analyst at Washington-based law firm Hogan & Hartson (No. 94), clearly valued a recent opportunity to work with her colleagues in Beijing. "I was really able to connect with the [IT] people there," she says.

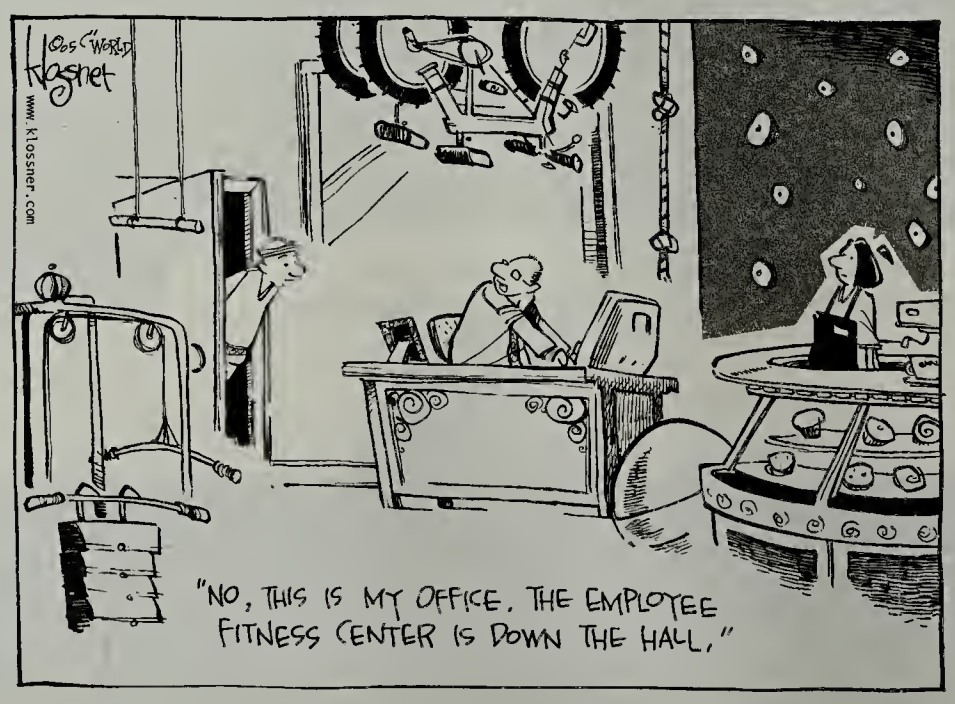
That connection is made when foreign workers come to the U.S. as well. Pat Baksh, a systems analyst at American Fidelity Assurance (No. 3), was blown away when she arrived from Trinidad and Tobago and co-workers helped her and her family get settled in the Oklahoma City area. "That's one of the things I like about working at American Fidelity," she says. "They have a heart."

And while we're talking about this global outlook, there was one statistic from our Best Places survey that I found particularly interesting. It had to do with offshore outsourcing, perhaps the most controversial issue confronting U.S. IT workers. It turns out the Best Places respondents reported an increase in their use of offshore contractors, from an average of 47 employed by these companies last year, to 69 in 2005.

So, what we have here is a circumstance in which the 100 companies that IT professionals consider to be the most attractive places to work are aggressively expanding the practice of outsourcing work to overseas locations. What conclusions can be drawn from that?

Maybe offshore outsourcing isn't the morale killer it's widely perceived to be. Maybe the efficiency and cost savings it often yields are seen by business-savvy IT workers as net gains for the IT organization. And maybe emotion is finally starting to give way to reason. If so, that's one of the best lessons the rest of corporate America stands to learn from the Best Places. **55203**

Don Tennant

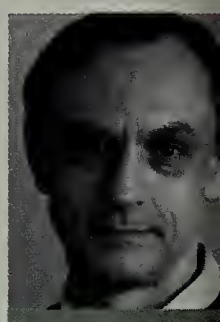


MICHAEL H. HUGOS

Is IT a Utility or a Profession?

THE GREAT NEMESIS of the IT profession, Nicholas Carr, is back with more scary and controversial things to say [QuickLink 53976]. I'm amused to see us all rush to refute his pronouncements. But, to paraphrase a famous quote, methinks we doth protest too much.

Carr is right about a number of things, and many of us know it. A big chunk of what we do in the IT business — stuff like running networks and application systems, and installing and supporting packaged software — is necessary but no longer strategic to most organizations. Ironically, because we have gotten so good at these things, they have become commoditized. Now it often does make sense to outsource them to an IT utility, just as we outsource the production and delivery of electricity to an electric utility.



MICHAEL H. HUGOS is C at Network Services Co., a distribution cooperative in Mount Prospect, Ill., that se food-service and janit rial supplies. He is t author of *Building th Real-Time Enterpris An Executive Briefin* (John Wiley & Sons Inc., 2004). He ca be reached at mhugos@nsconline.com

There is a great divide in the IT business between people who deliver services based on their knowledge of IT products, and people who deliver services based on their knowledge of the core IT techniques [QuickLink 53699]. This is because the practice of IT is actually reaching a new level of maturity.

Up until about 1980, technology didn't change that quickly, and practitioners tended to identify themselves by the programming language, operating system or hardware they knew.

The pace of change accelerated in the client/server world of the 1990s. Popular languages came and went every three or four years (remember dBase and PowerBuilder?). Hardware and operating systems got better and more powerful every year.

This forced people to take one of two paths. The first was to devote themselves full time to learning new

languages and staying current with the newest release of an operating system. The other was to learn to apply a set of techniques that could be employed in a range of business situations regardless of the specific technology being used.

Since hardware and software vendors are consolidating rapidly, there are only a few dominant software packages, operating systems and hardware platforms left. Use of an ERP, CRM or office automation system no longer confers a competitive advantage. The installation and operation of these systems by a few large service providers — utilities — is rapidly becoming a very cost-effective way to go. Organizations are reaching a point where they no longer need to have people skilled in operating such systems on their own payrolls.

IT practitioners whose skills are largely based on detailed knowledge of a certain software package, programming language or operating system are heading for a future in an outsourced utility. Practitioners who apply a set of core techniques to design and build systems enabling organizations to accomplish their unique goals are the ones who will define the future of the IT profession. These practitioners will be indispensable to the way organizations deliver products and services to their customers.

Precisely because software packages are so common, the level of competition is increasing and the opportunities for growth and profit are shifting to new areas. Profit no longer lies in pumping out masses of commodity products to as large an audience as possible. Profit now lies in wrapping commodity products in a blanket of customized, value-added services that make them uniquely attractive to each customer. And since all value-added services are information-based, companies urgently need IT professionals who know how to use technology to deliver this value. **55152**

MICHAEL GARTENBERG

IT Needs to Get On Board With RSS

I OFTEN LIKE TO SAY that the goal of an IT department is to stay off the obituaries page and every so often try and get in the headlines. RSS is exactly the technology IT needs to make some headlines, and now is a great time to start using it.

By now you've heard of RSS, or Really Simple Syndication [QuickLink 46266]. I've written in the past about how it can change the way business users aggregate and read information from the Web and give companies a new way to deliver their messages directly to customers.

The use of RSS by most firms is nascent at best (and that's why now's a great time to get on board). Most IT shops are giving little thought to what RSS means to their mainstream customers and instead are targeting only sophisticated users. This is a mistake, because RSS is a technology with mainstream appeal, not something only for the enthusiasts.

MICHAEL GARTENBERG is vice president and research director for the Personal Technology & Access and Custom Research groups at JupiterResearch in New York. Contact him at **mgartenberg2@optonline.net**. His weblog and RSS feed are at *http://weblogs.jupiterresearch.com/analysts/gartenberg.*

RSS is, of course, all about syndication, and that means there's all sorts of content that you can send to users. While most RSS users started out by subscribing to weblogs and later added news content, RSS need not be limited to these types of applications. Think out of the box and take advantage of the flexibility of the format. With support for secure protocols, customers can gain access to all sorts of information that's relevant to them via RSS. Whether that's the Sunday circular with links back to a Web site for purchase, a record of financial transactions in real time or lists of travel specials, RSS opens up a whole new world for maintaining a dialogue with your customers. At the end of the day, that's what it's all about.

But IT can't just put the technology out there without articulating the potential benefits to users and explaining some of its confusing aspects. Although browsers and other tools are becoming more RSS-aware and things should be better in the future, there are still plenty of ways for users to be confused. Among them are the very different RSS subscription buttons on sites. IT shops need to help sort through this complexity for their customers. Make recommendations that point users to browsers or online services that will let them subscribe to feeds, and walk them through the process. Users will be grateful, and you'll get them using the technology faster.

Like the Web itself, RSS is a sea change in online technology. The simple nature of the format, combined with the overall benefit to end users, is something every IT shop needs to point out to its internal customers.

But there are things to bear in mind. RSS in and of itself is just another techie specification; its power is that it allows you to extend the dialogue that your company is having with employees and the outside world. And RSS is different from technologies such as e-mail, because the user is the one in control of whether to keep the dialogue going or terminate it; the goal is to increase your relationship and grow your conversation, ultimately leading to customer loyalty and of course a continued dialogue. Increasing RSS use is just a means to that end — and a way to help you get in the headlines for a change. **55109**

WANT OUR OPINION?

More columnists and links to archives of previous columns are on our Web site: **www.computerworld.com/columns**

READERS' LETTERS

Going Open-Source

I HOPE THAT Steve Randich ["Nasdaq CIO Confirms Move to Open-Source Instinet Apps," QuickLink 54399] has a good story to tell his board of directors when they find out that his cheap new commodity system crashes more often than the one it's replacing.

The HP NonStop line has been engineered for ultrahigh crash resistance for the past 30 years. Probability that Randich's whiz kids can assemble a previously untried combination of hardware and software into a system with comparable reliability: zero.

Mark Wallace
Principal consultant, Mission Viejo, Calif., m.wallace@computer.org

Blog Boom

GREAT ARTICLE by Patrick Thibodeau ["IT Blogging Is One-Sided," QuickLink 54685], though I would say one thing about the reported number of bloggers at each company. In conducting a survey of the corporate blogging industry, my company developed a list of corporate bloggers. While 1,500 people at Microsoft might have signed up to write blogs, few of them are active. Some have only a few articles posted, from a number of months ago. Each company does have a quantity of content-rich blogs, but the number is a lot less than the hundreds or thousands described in this article.

John Cass
Director of Internet marketing strategies, Backbone Media Inc., Waltham, Mass.

Securing Devices

IN HIS EDITORIAL "Device-driven" [QuickLink 54651], Don Tennant said, "Your networks and devices might be bulletproof, but there will be nothing to mitigate the insider security threat when your organization is inundated with what are essentially portable hard drives with exponentially growing storage capacities." How is this different from the capacity of a laptop or a key-chain USB drive? If someone inside wants to take lots of data out the door, they can and have been able to for a long time.

Dave Podolske
Systems administrator, Freescale Semiconductor, Lake Zurich, Ill.

WHILE I UNDERSTAND the need for security in corporate and government environments, I would argue that adoption of thin-client computing will do little to protect resources and material. The problem is not with the mechanics of one system over another, but rather with the nature of the beast – the beast in this case being the employees.

IT managers and CIOs can take every step imaginable to secure their systems and the information contained therein, but until they can change the mind-set of the employees using those systems, security holes will continue to exist and will grow larger. People must be properly trained and motivated to treat systems and the information they contain as sensitive.

Technology will continue to change and evolve. As such, vehicles that pose risks will surface with each new change and innovation. Only by addressing the users of these vehicles will security goals ever be truly actualized.

William Butler
Technology department, Gilmer Independent School District, Gilmer, Texas

COMPUTERWORLD welcomes comments from its readers. Letters will be edited for brevity and clarity. They should be addressed to Jamie Eckle, letters editor, Computerworld, PO Box 9171, 1 Speen Street, Framingham, Mass. 01701. Fax: (508) 879-4843. E-mail: letters@computerworld.com. Include an address and phone number for immediate verification.

For more letters on these and other topics, go to **www.computerworld.com/letters**

AFTER A LONG DROUGHT,

IT JOBS ARE NOW GROWING.

Now that the IT hiring climate is finally perking up, it's important to cultivate the right connections. And that's where Robert Half Technology can definitely help. With over 100 offices nationwide — staffed with hiring managers who really know the IT marketplace — we have access to some of the most interesting opportunities and cutting-edge technology companies. Plus we offer competitive pay, great benefits and a world-class online training program. So whether it's contract or full-time opportunities you're after, call Robert Half Technology today. And watch your career take root again.

800.793.5533 • rht.com

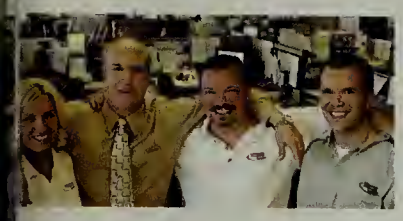
WE GET IT. WE SPEAK IT. WE KNOW IT.

Robert Half® Technology

Information Technology Professionals

A Robert Half International Company

© Robert Half Technology. EOE 0405-4201



No. 1: Quicken Loans
Great benefits and trips to Las Vegas helped vault Quicken Loans to the top spot. But a common goal to succeed and autonomy for its IT workers sets the company apart. PAGE 32

The Top 100
A list of this year's Best Places companies, plus rankings for the tops in diversity, training, retention and other areas. PAGE 44

Best Practices
How Best Places are making great hires, communicating within IT and the business units, and fostering an environment for fresh ideas and innovation that benefits employees like Ruth Diaz of Hogan & Hartson. PAGE 62

12th ANNUAL REPORT

100 BEST PLACES TO WORK IN IT 2005

GREGG MATTHEWS

CHALLENGING PROJECTS helped make Publix Super Markets one of this year's Best Places to Work, say Bill McDonough, Ana Lorenz and Mike Imperiale of the Publix IT department.

FOR THE PAST TWO YEARS, Bill McDonough has been a project lead on one of the most stressful projects he's ever worked on in his IT career. Formerly an IT consultant, he is now senior systems analyst at Publix Super Markets Inc., an $18.6 billion supermarket chain based in Lakeland, Fla., that is ranked No. 56 on *Computerworld*'s 2005 list of the Best Places to Work.

The project — still in its pilot phase — involves replacing the point-of-sale (POS) systems in Publix's 852 grocery stores in Florida and four other Southern states. So far, five stores are live, with 120 more planned for completion by the end of the year. The remaining stores will go live by the end of 2006.

So why does McDonough sound so happy? "It's been one heck of a project — high visibility, high stress, lots of hours but a ton of fun," he says. "Getting that point-of-sale system into the store has been a real achievement."

> What's the secret to building a strong and satisfied IT workforce? More than money and benefits, it's the value of the work itself. By Mary Brandel

And McDonough isn't the only one feeling satisfied with his job. To work at one of this year's Best Places is to know the rewards of challenging projects, competitive salaries and career development. In fact, our survey of 20,435 IT workers at this year's Best Places showed higher satisfaction ratings than the 2004 Best Places employees reported in a variety of areas, including bonuses, morale, corporate culture and job security (see "Positive Gains," next page).

How to account for this increase in optimism? Certainly the economy has yet to hit its stride — although the job market is improving, growth is sluggish at best, with the jobless rate holding steady at 5.1%. And the offshoring trend continues unabated, with this year's Best Places respondents reporting an increase in their companies' use of offshore contractors, up from an average of 47 contractors last year to 69 today. Meanwhile, Forrester Research Inc. expects growth in IT spending to remain at 2004's 7% level.

But McDonough's satisfaction has very little to do with economic indicators. He says the answer may have something to do with living in Central Florida itself, as well as the stability of Publix, a 75-year-old, employee-owned organization where nearly a quarter of the IT staff has tenure of 10 years or more and where no one from IT was laid off during the downturn.

A bigger factor, though, is McDonough's experience of working on a

Positive Gains

After a dip in 2004, satisfaction in many areas returned to 2003 levels, based on employee responses from the annual Best Places survey. Fewer layoffs could be a factor here: The percentage of Best Places that laid off IT employees in the previous year dropped, from 46% in the 2004 survey to 43% in the 2005 survey. Some other figures of note:

	2003	2004	2005
Employees who reported good to excellent morale:	79%	75%	78%
Employees who reported that their job is stressful:	34%	37%	35%
Employees who reported that they are proud to work for their company:	86%	83%	85%
Employees who reported that their company is run ethically and honestly:	83%	80%	83%
Employees who reported that they have opportunities for career growth:	76%	73%	75%
Employees who said that their company is a great place to work in IT:	76%	72%	75%
Employees who reported that they are satisfied with their bonuses:	54%	51%	57%
Employees who said that their company's corporate culture is positive:	*	71%	75%
Employees who said that they feel their job is secure:	*	62%	69%
Employees who said that they feel they have a hand in running their company:	*	39%	43%

*These question were added to the Best Places survey in 2004.

SOURCE: 2005 BEST PLACES COMPANY SURVEYS

meaningful project with a team of IT and business people who are fully vested in the project mission and what it takes to achieve a successful outcome. Despite the stress, he says, it's the best project he's ever worked on.

"There was great synergy between us," McDonough says. "Everyone was focused on solving problems, and everyone wanted to hit a home run."

Beyond the Basics

While IT workers are content with their compensation, it's becoming clear that monetary rewards alone won't catapult a company into the Best Places to Work elite. Of course, financial stability is important to IT workers, and there's good news on that front among the Best Places, where hiring, salaries and bonuses are expected to climb (see box, right). Meanwhile, the percentage of Best Places that laid off IT employees in the previous year dropped, from 46% in the 2004 survey to 43% in the 2005 survey.

In fact, the looser job market probably played a role in the increased satisfaction levels, says Paul Glen, an IT management consultant in Los Angeles and author of *Leading Geeks: How to Manage and Lead the People Who Deliver Technology*. "For the past three or four years, people were not quitting their jobs because no one was hiring," says Glen, who's a *Computerworld* columnist. "I'm willing to bet people have been able to leave jobs they hate." In addition, he says, organizations seem to be starting new projects, affording IT people new opportunities.

But fair compensation just gets you in the game, Glen says. "I'm not sure satisfaction comes from the lowest levels of Maslow's hierarchy — it's when you can forget about them that it's exciting," he says.

And that's what CIOs and rank-and-file employees at the Best Places like to emphasize: The satisfaction of doing meaningful work that clearly correlates with business goals is valued by management and business peers alike and is rewarded as such. Some even say that in an age when corporate loyalty is all but nonexistent, contributing value is the new job security.

"People have turned toward thinking that as long as they're part of a critical component of the organization that is having true bottom-line impact, that's something secure they can hold on to — a benchmark they can see," says Jo Ann Boylan, chief technology officer at Ohio Savings Bank in Cleveland, which is ranked No. 33 on the list. "Everyone wants to know where they stand."

This will remain the case even as the economy heats up, says Chris Avery, a principal at Cutter Consortium in Arlington, Mass. "Although they want to be competitive, most companies are concentrating on creating engaged work environments to let [IT workers] feel like they're creating value, sharing responsibility and working in a community that's an enjoyable place to spend eight or 10 hours of the day," he says.

Visible Evidence of Value

So how do the companies on the Best Places to Work list foster this type of atmosphere? One way is to structure projects so that IT staffers have front-line visibility into the usefulness and importance of what they're building. "People love to see their technology get used," Glen says.

At Novartis Pharmaceuticals Corp. in East Hanover, N.J., which is No. 20 on the list, IT groups work directly with the various business units, as directed by a business information manager who focuses on the strategic issues of a particular unit. For example, when members of the IT group responsible for online marketing development see a TV commercial for Novartis' Take Action for Healthy BP program and a link to its Web site, "we get satisfaction that we contributed to making that happen," says Al DelloRusso, executive director of e-business professional services.

This type of connection doesn't just happen. At bimonthly meetings, the IT staff listens to the latest customer testimonials about Novartis' products. "The people in the audience really get that they're working for a health care company," says Rob James, CIO at Novartis.

At the University of Pennsylvania —

Continued on page 30

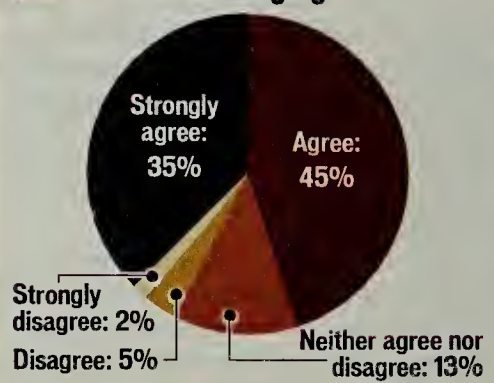
BY THE NUMBERS

92%	of companies have budgeted for salary increases for IT employees in 2005.
87%	of companies have budgeted for bonuses for IT employees in 2005.
49%	of companies said their training budgets per IT employee will increase in 2005 compared with 2004.
61%	of companies expect the number of U.S.-based IT staffers to increase in 2005, on average by 9%.
3%	of companies expect the number of U.S.-based IT staffers to decrease in 2005, on average by 6%.
36%	of companies expect the number of U.S.-based IT staffers to stay the same in 2005.
11%	of IT staffers were promoted in the latest fiscal year, on average.
7%	was the average IT staff turnover rate for the latest fiscal year.

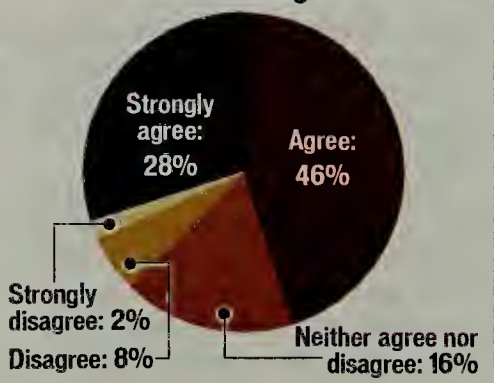
SOURCE: 2005 BEST PLACES COMPANY SURVEYS

SOURCE FOR PIE CHARTS AT RIGHT: RESPONSES FROM 20,435 IT EMPLOYEES AT THE 2005 BEST PLACES COMPANIES

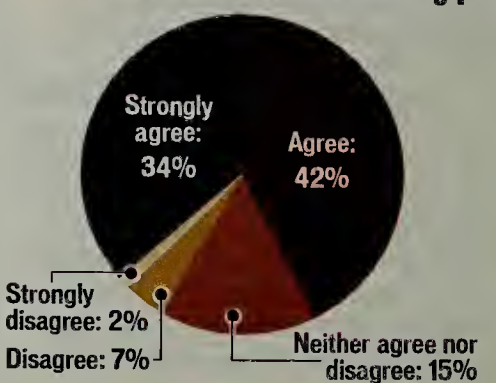
My job is interesting and challenging.

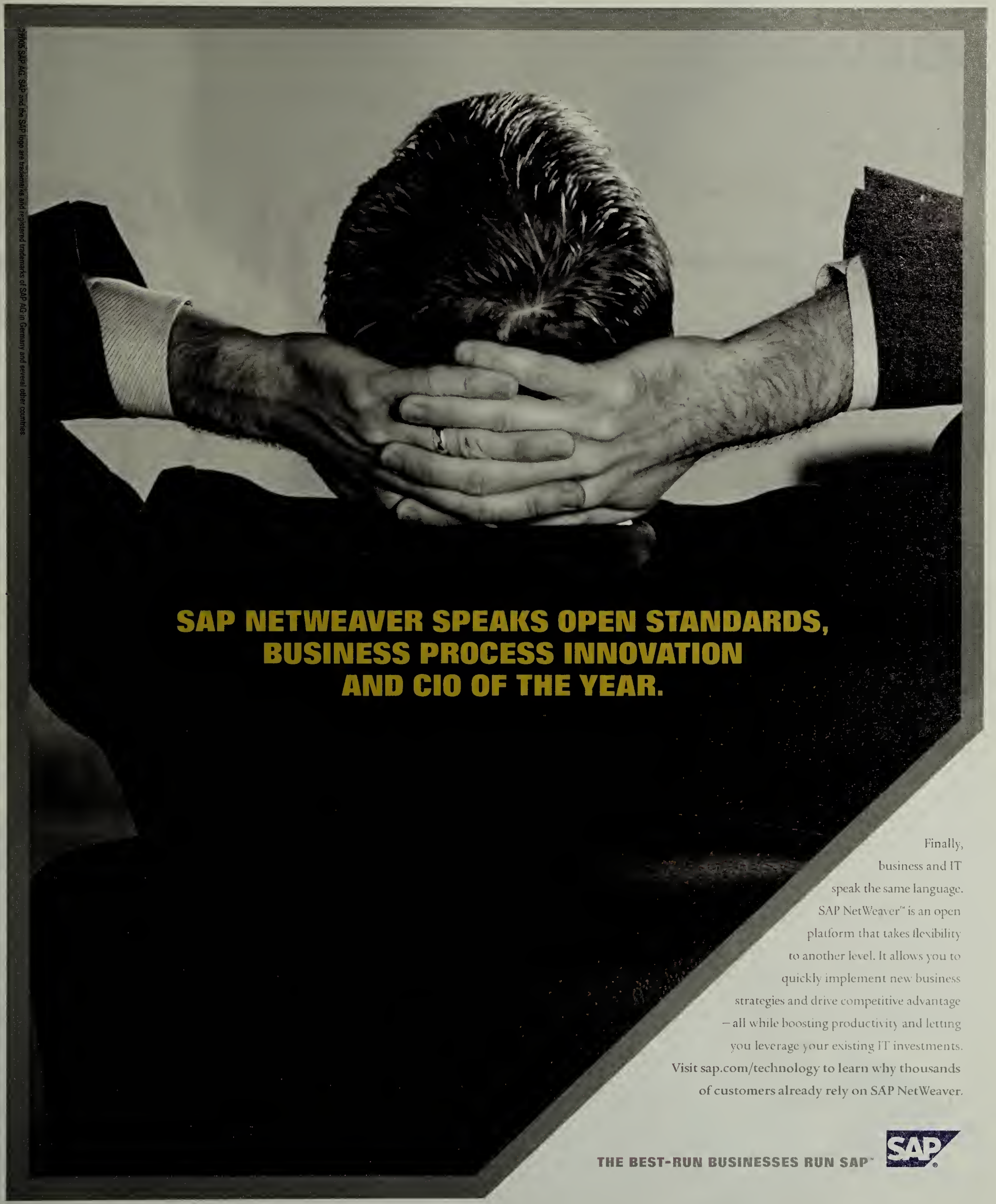


I have access to new technologies.



I have the opportunity to get involved with interesting proje





SAP NETWEAVER SPEAKS OPEN STANDARDS, BUSINESS PROCESS INNOVATION AND CIO OF THE YEAR.

Finally, business and IT speak the same language. SAP NetWeaver™ is an open platform that takes flexibility to another level. It allows you to quickly implement new business strategies and drive competitive advantage – all while boosting productivity and letting you leverage your existing IT investments. Visit sap.com/technology to learn why thousands of customers already rely on SAP NetWeaver.

THE BEST-RUN BUSINESSES RUN SAP™

SAP®

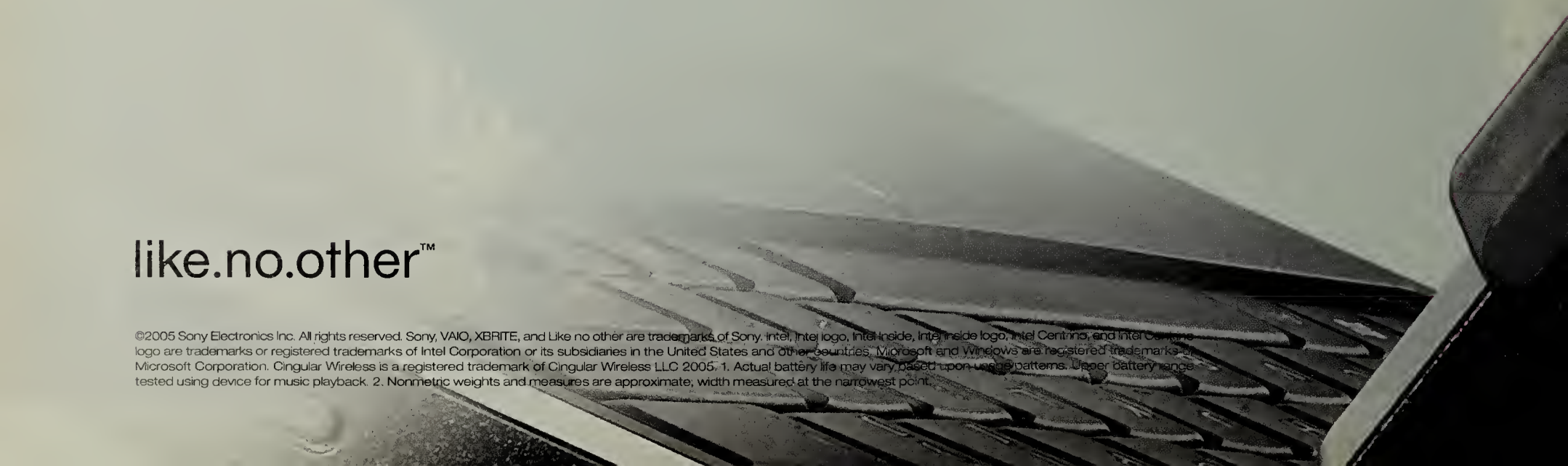
©2005 SAP AG. SAP and the SAP logo are trademarks and registered trademarks of SAP AG in Germany and several other countries.

SONY®

BE YOUR HOT SPOT.

With Sony, the Wireless Wide Area Network is open for business.

The Sony® VAIO® Professional T-300 Series Notebook with Intel® Centrino™ Mobile Technology is the only notebook PC that gives you a Web connection anywhere on the Cingular® national EDGE network, extending your wireless coverage beyond Local Area Networks and hot spots. Visit **www.sony.com/t300** for more information.



like.no.other™

©2005 Sony Electronics Inc. All rights reserved. Sony, VAIO, XBRITE, and Like no other are trademarks of Sony. Intel, Intel logo, Intel Inside, Intel Inside logo, Intel Centrino, and Intel Centrino logo are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries. Microsoft and Windows are registered trademarks of Microsoft Corporation. Cingular Wireless is a registered trademark of Cingular Wireless LLC 2005. 1. Actual battery life may vary based upon usage patterns. Upper battery range tested using device for music playback. 2. Nonmetric weights and measures are approximate, width measured at the narrowest point.

VAIO®
PROFESSIONAL

Sony recommends Microsoft® Windows® XP Professional.

OWN

10.6" widescreen display with XBRITE™ LCD technology

From 4 to 9 hours of battery life[1]

3.04 lbs. and 1" thin[2]

VAIO

intel inside
centrino
MOBILE TECHNOLOGY

Continued from page 26

where projects are led by a joint team that includes a technology and a business project manager — IT staffers are intimately intertwined with the functions of the university, be it the research department, the admissions department or student services, says Robin Beck, vice president of IS at Penn, which is ranked No. 8 on the list.

Penn makes sure the fruits of IT staffers' labor are visible by, for instance, creating a public record of how much money it saves by using the Web-based e-procurement system, developed in part by IT. "If you isolate IT people, they wonder, 'What am I doing here?' " Beck says. "But if they're working closely with their clients, they find a bond and see how what they're doing contributes to the organization."

At the California State Automobile Association in San Francisco, which is No. 54 on the list, the IT staff had a dramatic entree this year into how technology affects not only the lives of their business counterparts but also those of CSAA members.

The organization just completed redoing its membership system, moving from a 15-year-old system to one based on a new Web-based infrastructure. IT developed the system but also partnered with the training department to develop e-learning modules to enable everyone (including IT staffers) to understand how people in the call center and district offices would interact with members on the new system.

This intensive interaction grew out of CSAA's 3-year-old Vision & Values program, intended to bring about a cultural transformation at the organization, according to CIO Sally Grant. "It's aligned us and given us a charter," she says. "The IT organization is feeling more valued now than it ever has, at least in my time at CSAA."

Business and IT: Joined at the Hip

Visibility can happen only when IT comes out of isolation and works directly with business peers. During the POS project at Publix, two former store managers worked with McDonough's team full time, from requirements through final testing. This ensured that the system would meet store associates' needs, and it also made the managers completely sympathetic about what it took technology-wise to develop a bulletproof POS system, McDonough says.

At Partners Healthcare Systems Inc. in Boston, which is ranked No. 42, IT workers interact with all levels of the organization, from senior executives to medical directors and staffers in patient registration and the labs. "Teamwork is promoted here, and that allows you to learn the business and operations so you can put value on the work you do," says Lisa Adragna, a senior project manager and 20-year veteran at Partners. Adragna says she also enjoys Partners' leading-edge use of technology. "We get to work on stuff that folks across the nation haven't done yet," such as an enterprise master patient index, which Partners was among the first to develop, she says.

Seating IT workers with the people they support is a key part of the agile workforce that Cutter Consortium's Avery sees forward-thinking corporations trying to develop. In those companies, clients come "live" with the IT team to work together in real time, he says. But the fact is, successful teams can only be encouraged — not forced. The key ingredient: allowing them to focus on important work.

And that's just what Ohio Savings Bank's Boylan plans to emphasize as she sees the job market in Cleveland heating up. "IT folks want to know they're not doing discretionary work, and that's been one of the biggest things we use when we're talking to job candidates," she says.

Meaningful Rewards

Just as work needs to be meaningful, so do the ways in which you reward the work. Best Places have a variety of rewards programs, ranging from glitzy ceremonies where employees are honored by the CEO to performance-related bonuses, team parties, handwritten thank-you notes and gift cards.

But peer recognition is perhaps even more meaningful. Employees at CSAA are encouraged to hand out nonmonetary awards to peers whom they see living out the organization's six defined core values, and through CSAA's Quick Hits program, they can give out a total of four $25 gift certificates to one another in a year.

And it helps to make it fun. In large group meetings at Novartis, IT staffers have watched colleagues and managers perform parodies of *American Idol* and *The Apprentice*, and sing karaoke "very badly," James reports.

Great Relationships

But just as you can't force good teamwork, you also can't force fun. As Glen says, if people are worried about job security, having Friday pizza parties is like planning a beer bash on Death Row to get people's spirits up.

At the same time, good relationships can make or break the quality of your corporate culture. The quality of office relationships is an important ingredient for employees at the Best Places, with 94.8% reporting that they have good relationships with co-workers.

At Penn, positive relationships are forged in part by the university's open communication environment, as well as its willingness to confirm the value of individual contributions through tangible action, according to Marion Campbell, an IT director there. For instance, when her group wanted to emphasize the importance of preparing end users for new technology, it coined the phrase "community readiness," which is now used on all projects.

Similarly, the IT staff at Novartis has adopted "open space" meetings to encourage a "speak-up" culture. The meetings are often shaped around a single question for employees to probe. The purpose, James says, is to "get the moose on the table," or in other words, put out a difficult issue for people to discuss without fear of repercussions.

Of course, the only way a company can be a "best place" is if IT staffers who work there perceive it that way. And that can happen only when there's a good fit between the employer and the employed. "It's like asking, 'What's the best country to live in?' " says Glen. "It's really a matter of who's managed to put together the best fit between the environment and the staff."

For instance, Beck lets job applicants know about Penn's flat, team-based setup. "I absolutely know you will not like Penn if you measure your career development linearly," she says.

The key is to be really good at choosing employees who will fit in.

For his part, McDonough says that although he might prefer to fish all day if he didn't need a paycheck, happiness comes from knowing he has completed a project that delivered what people really needed, without losing sleep at night. "I want to work at a stable company with a decent salary," he says, "where I can walk in with a smile on my face." **54847**

Brandel is a Computerworld *contributing writer in Grand Rapids, Mich. Contact her at mary.brandel@comcast.net.*

WISH YOU WORKED HERE?

The perks of being an IT employee at the University of Pennsylvania (No. 8):

SOCIAL SCENE: Campus events and activities such as changing exhibits at the campus Institute of Contemporary Art and first-class entertainment at the Penn Annenberg Center.

BENEFITS PACKAGE: Includes a proactive wellness program that offers health fairs, health screenings and flu shots, plus seminars on subjects like weight, stress and cholesterol management, and developing healthy family and personal relationships.

FLEXTIME: Four flexible work options (flextime, flex-place, compressed work schedules and part-time work).

CHILD-FRIENDLY ATMOSPHERE: On-site child care and backup child care, with subsidies of approximately 50% for some employees.

RETIREMENT PLANS: A university-paid retirement plan, a 403(b) with a 100% match of up to 5% of pay, an option for additional after-tax contributions and catch-up savings for workers 50 and older.

HIGHER EDUCATION: Employee tuition at the university is fully funded upon hiring. After three years, the university picks up 75% of undergraduate tuition for employees' children and 50% for spouses.

TIME OFF: 15 days off the first year and 24 days after five years, plus eight holidays and a winter break period between Christmas and New Year's Day.

Perks Plus

Is it a good day at your office when the coffee machine isn't on the fritz? Check out what your peers at Discover Financial Services Inc. (No. 55) enjoy:

- A new **employee services pavilion** houses a 19,000-square-foot fitness center offering full-service strength and cardiovascular training areas, personal trainers, massages and classes in Pilates, yoga, kickboxing and karate.
- The 1.2 million-square-foot **campuslike setting** offers outside basketball and volleyball courts and a 1.8-mile running trail.
- An **Internet cafe** and a 20,615-square-foot **full-service cafeteria** featuring TV sets tuned to CNN, salad bars, pasta and sushi stations and Starbucks coffee.
- Monthly **awareness programs** offer opportunities to learn about subjects ranging from health care and family counseling to saving for your child's future.

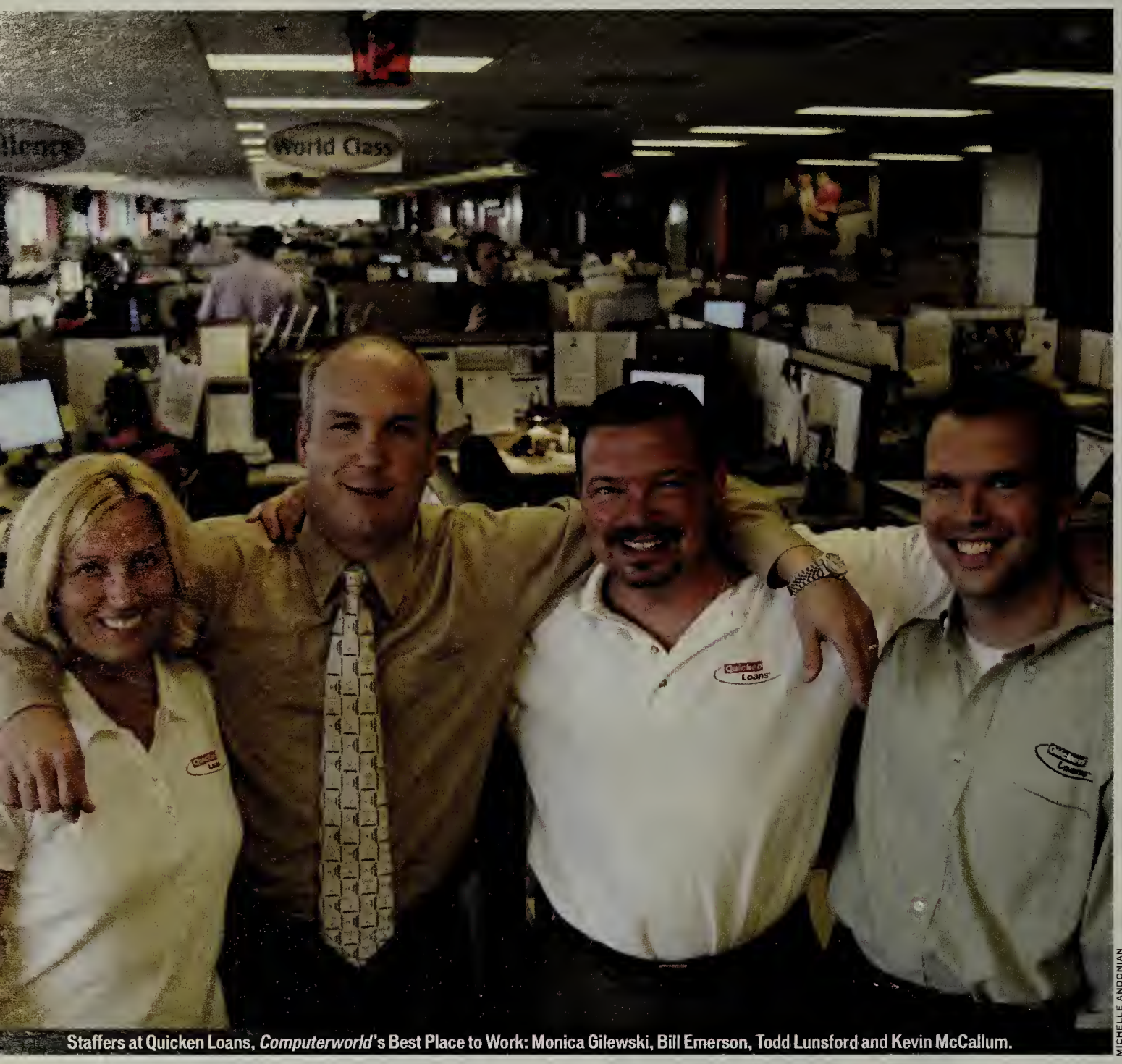
EMC²
where information lives

Fr: planning for the next glitch

To: planning for the next decade

EMC HAS EVERYTHING YOU NEED TO MANAGE YOUR INFORMATION EFFECTIVELY. Get more out of your IT resources with EMC. From world-class services and solutions to open software and proven systems, EMC provides tight integration for full compatibility with your existing infrastructure. So you can manage your information across its entire lifecycle while you manage your budget. To learn more, visit www.EMC.com.

EMC², EMC, and where information lives are registered trademarks of EMC Corporation. © Copyright 2004, 2005. EMC Corporation. All rights reserved.



Staffers at Quicken Loans, *Computerworld*'s Best Place to Work: Monica Gilewski, Bill Emerson, Todd Lunsford and Kevin McCallum.

MICHELLE ANDONIAN

FIRST-RATE FIVE

It's no accident that these companies hit the top of this year's list. Here's a look inside five amazing IT departments.

No. 1

Quicken Loans

Great benefits and trips to Las Vegas helped vault Quicken Loans to the top spot. But a common goal to succeed and autonomy for IT workers set the online mortgage lender apart.
By Thomas Hoffman

WHY THEY'RE TOPS

- Ranked No. 1 in retention
- 15% of IT employees promoted in 2004
- Ranked No. 2 in benefits
- Ranked No. 9 in training
- Training budget of $2,500 per IT employee

BONUS TRIPS to Las Vegas. Free slushies, cappuccino and popcorn. Weekly ticket giveaways to concerts and sporting events. An in-house rock band that livens up every meeting.

If it sounds like a throwback to the dot-com era, it is. Quicken Loans Inc., which earned the top spot on *Computerworld*'s Best Places to Work in IT list this year, is a decidedly unbureaucratic online mortgage lender that's infatuated with its workforce.

While the aforementioned perks, solid benefits and competitive pay certainly contribute to the strong employee morale at Livonia, Mich.-based Quicken Loans, it's really the company's employee-empowered, success-

Continued on page 35

SAS® SOFTWARE FOR SARBANES-OXLEY

THE POWER TO KNOW®

how to take control when so much is hanging in the balance.

ENTERPRISE INTELLIGENCE

SUPPLIER INTELLIGENCE

ORGANIZATIONAL INTELLIGENCE

CUSTOMER INTELLIGENCE

INTELLIGENCE PLATFORM

Achieving sustained compliance to protect shareholder value is no small feat – but SAS® Corporate Compliance software makes it easy. With SAS, you can more effectively track, store, document and audit every financial process and each necessary key control within your business. SAS also provides the technology to reduce reporting cycle times by quickly accessing, consolidating and cleaning all the financial data throughout your enterprise. And intuitive interfaces are designed for users of every skill level with a central point of control to manage across all environments. Find out more about why moving to SAS is your best choice for sustaining compliance efforts while maintaining risk management and growth.

go Beyond BI™ at **www.sas.com/sox** • 1 866 270 5729

sas®

SAS and all other SAS Institute Inc. product or service names are registered trademarks or trademarks of SAS Institute Inc. in the USA and other countries. ® indicates USA registration. Other brand and product names are trademarks of their respective companies. © 2005 SAS Institute Inc. All rights reserved. 331463US.0605

Congratulations Award Recipients!

COMPUTERWORLD
MOBILE & WIRELESS WORLD
Best Practices IN MOBILE & WIRELESS
AWARDS PROGRAM

Mobile & Wireless World (M&WW), in conjunction with Computerworld, proudly presented the third M&WW "Best Practices in Storage" Awards Program. This program honored seven IT user "best practice" case studies selected from a field of qualified finalists.

Winners were recognized at the Mobile & Wireless World Awards Ceremony – Wednesday, June 15th in Scottsdale, Arizona

SPONSORED BY: intel

Deploying Wireless Mobility in the Enterprise

Recipients

- **Cox Communications, Atlanta, Georgia**
- **pH Europe Ltd, Huddersfield, United Kingdom**

Honorable Mention: Staples, Incorporated, Framingham, Massachusetts

---

Transforming the "Brick and Mortar" Enterprise

Recipients

- **Landstar System Incorporated, Jacksonville, Florida**
- **Zipcar, Cambridge, Massachusetts**

Honorable Mention: Blue Cross Blue Shield of Massachusetts, Boston, Massachusetts

---

Business Evolution through Mobilizing Field Workers

Recipients

- **Maytag Corporation, Newton, Iowa**
- **Saia Motor Freight, Duluth, Georgia**

Honorable Mention: The ServiceMaster Company, Downers Grove, Illinois

---

Managing Cellular Mobile Data

Recipient

- **The PMI Group, Incorporated, Walnut Creek, California**

COMPUTERWORLD
MOBILE & WIRELESS WORLD

For information on Mobile & Wireless World visit **www.mwwusa.com**

Judging Criteria

To evaluate nominations, judges considered each project's:

- Strategic importance to the business.
- Positive impact on other business/organization units.
- Substantive customer impact (service, retention, acquisition).
- Ability to provide a strategic advantage to the business/organization while anticipating and accommodating the deployment of future Mobile & Wireless initiatives.
- Financial return and measurable payback (returns on investment, assets, resources) through created/protected revenue opportunities or cost savings.
- Ability to address challenges of data, information and application security, etc.

Thank you to our "Best Practices in Mobile & Wireless" Judges for 2005:

- Steve Delahunty, Vice Chair, Network Professional Association
- Bruce Hoard, Technology Journalist and Network World founding editor
- Julia King, Executive Editor of Events and National Correspondent, Computerworld
- Ed Meskill, Publisher, Mobile Enterprise Media
- Ralph Nichols, Service Program Manager, Pitney Bowes, Inc.
- Jay A.T. Stallard, Senior Manager, Pfizer Global Pharmaceuticals
- John Stehman, Director of Research Operations and Principal Business Analyst, Robert Frances Group
- Daniel Taylor, Managing Director, Mobile Enterprise Alliance, Inc.
- John C. Wade, Vice President and Chief Information Officer, Saint Luke's Health System
- Carl Zetie, Vice President, Forrester Research

AWARDS PROGRAM
COMPUTERWORLD SUPPLEMENT*
CO-SPONSORS:

intel

cingular
raising the bar

*Planned for August 1, 2005 issue

10 MORE REASONS QUICKEN LOANS TOPS THE LIST

1. Promotes from within whenever possible.
2. Doesn't outsource IT work.
3. Offers a $100 annual home Internet reimbursement.
4. Gives two weeks' paid leave for both new mothers and fathers.
5. At its annual employee awards ceremony, honorees receive Oscar-style statuettes.
6. Employees can earn up to $2,000 for hiring referrals, with no limits on the number of referrals.
7. Employees can receive up to 25% of their base pay in year-end bonuses.
8. Team leaders can reward exceptional performances with spot bonuses of up to $10,000.
9. Offers $5,000 in tuition assistance per year.
10. Offers elder care assistance.

Continued from page 32

driven environment that led its 200 IT workers to give the firm such high marks in their Best Places survey responses.

"The thing that's so great about this place is the culture," says Kevin McCallum, Quicken Loans' chief systems architect, who joined the company eight years ago. "We bring in people who are passionate about what they do and free to do what they want, and it breeds that sense of ownership." McCallum should know — he previously worked for a large IT services company where, he says, "it took months and months to get anything done."

Whether it's in the IT department or other parts of the organization, workers at Quicken Loans "know they're part of the team and that they make a difference in client lives," says CEO Bill Emerson. "When people come to work and feel like they make a difference, they feel so much better."

Whenever staff members join the company, they spend three hours with chairman Daniel Gilbert and 90 minutes with Emerson to discuss the company's philosophy. The organization is extremely flat — Gilbert, Emerson and other executives are seated throughout the office with everyone else. And that staff is growing fast: Quicken Loans now has more than 3,000 employees, including nearly 300 IT workers. Employees are so highly valued that Emerson hand-writes birthday cards not only to each of them but also to each of their children.

Of course, it takes more than personalized birthday cards to keep IT workers happy. One of the things that makes Quicken Loans such a magnet for IT professionals is that the company develops nearly all of its software applications internally, save for a handful of off-the-shelf systems. For instance, the IT department developed its own CRM system that's "100% geared" toward the firm's online mortgage business, says McCallum.

Internal software development "goes a long way in giving people a certain comfort level," McCallum adds. "We let people ride with it."

It also contributes to the kind of entrepreneurial spirit that has helped the company grow from $4 billion in loans handled in 2002 to a projected $15 billion this year. Such growth is pushing the company to hire 100 to 150 new workers each month, including Unix, telecommunications and IT quality assurance professionals, says Monica Gilewski, vice president of human resources.

Three years ago, an IT worker developed an interest in adopting electronic signature technology for online mortgage documents. Unable to find a suitable off-the-shelf application, she crafted a custom system, and it shaved days off the mortgage process, says McCallum.

Quicken Loans also has a program called Process Perks that encourages employees to recommend process-improvement ideas for the company through its internal Web site. The ideas are fed into a database, and employees can go online to find out where their ideas stand in terms of consideration and deployment, says Gilewski.

Says Emerson, "We're fanatical about getting feedback from our folks and acting on it."

The company's kookiness also keeps people fired up. Last year, in recognition of an accomplishment for a fellow IT worker, a co-worker started a "random standing ovation" that lasted two minutes, says McCallum. Now, "it's just a thing. Someone will start applauding, and it goes down the aisle."

That kind of recognition goes a long way beyond the usual salary and benefits. "One thing that a lot of companies don't do that we do a lot is say 'Thank you,' " Emerson says. **54402**

Distinguish Your Career with a Financial Powerhouse.

HSBC - North America serves more than 60 million customers in five key areas: personal financial services, consumer finance, commercial banking, private banking, and corporate investment banking and markets. As one of the largest banking and financial services organizations in the world, with over 10,000 offices in 77 countries and territories, we continue to experience significant growth in our business.

As the world's local bank, HSBC also recognizes and appreciates the unique contributions that each employee, supplier, and customer brings to our business success. As a worldwide leader in the financial services industry, we have earned recognition as an "Employer of Choice" by numerous national and local publications as well as achieved a ranking among the top five of FORBES Global 2000 list. If you would like to play an important role within our dynamic organization, explore our current openings.

INFORMATION TECHNOLOGY PROFESSIONALS

What you need for success:
- Bachelor's degree or equivalent
- High energy
- Self-motivated
- Prior related working experience

What you'll get:
- Market-competitive compensation
- Full medical/dental/life insurance
- Industry-leading 401K with match
- Tuition reimbursement
- Discounted employee stock purchase plan

COMPUTERWORLD 100 BEST PLACES TO WORK IN IT 2005

Interested candidates, please apply online at: **www.joinhsbcusa.com**
HSBC is an equal opportunity employer committed to workforce diversity.

HSBC

No.2

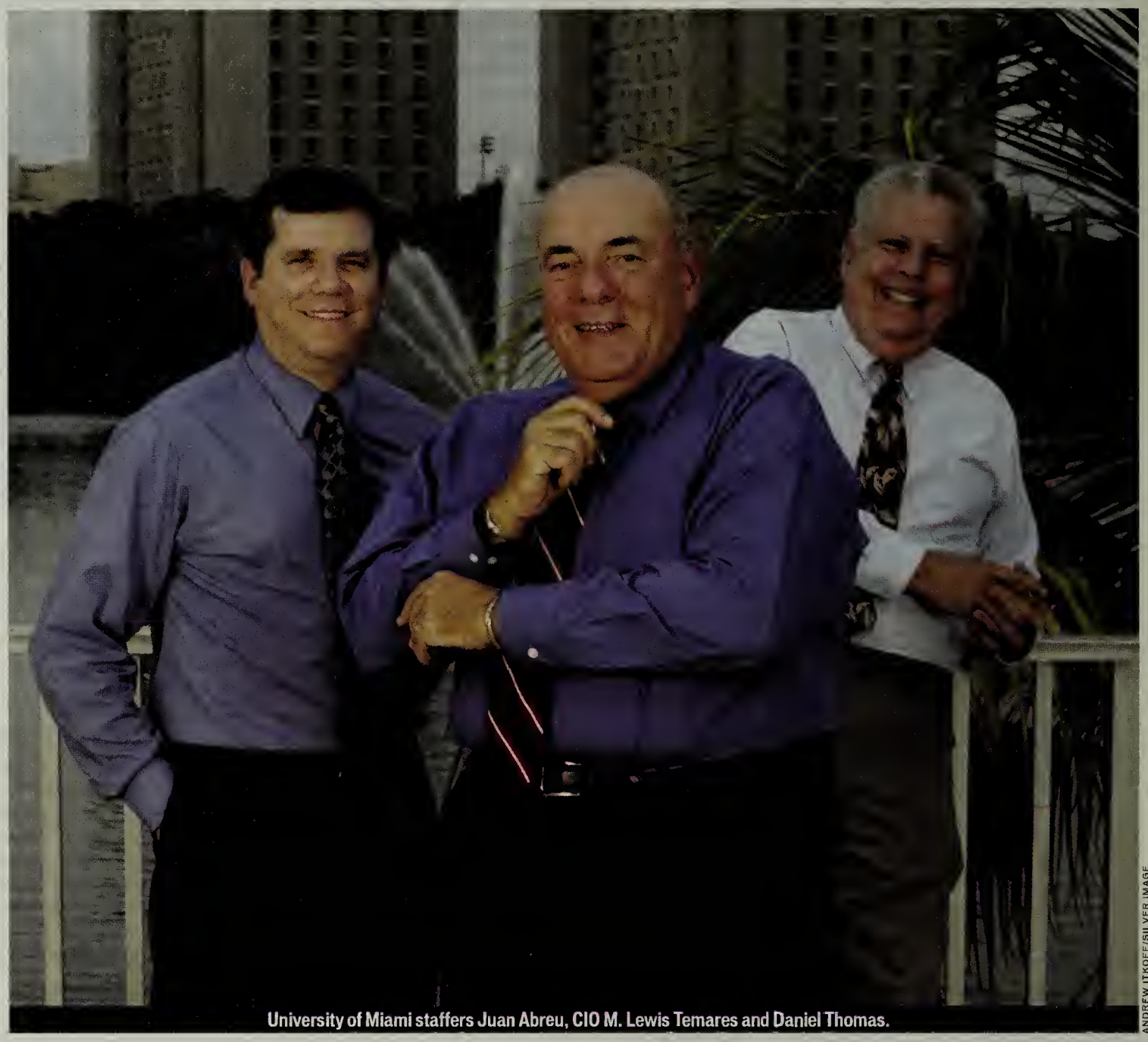
University of Miami

IT professionals often find themselves in the thick of things with students and administrators, working on everything from PC setups to admissions requirements. And that's just how they like it.

By Gary H. Anthes

WHY THEY'RE TOPS

- Ranked No. 5 in retention
- Ranked No. 3 in diversity
- 50% of IT managers are minorities
- Ranked No. 2 in training



University of Miami staffers Juan Abreu, CIO M. Lewis Temares and Daniel Thomas.

ANDREW ITKOFF/SILVER IMAGE

WHEN THE University of Miami in Coral Gables, Fla., set up a new student housing system, the developers who worked on it spent three weekends at the housing office, helping the staff there answer questions from students. The result of their efforts was a system that incoming students could use to find roommates and select rooms online before arriving on campus. Then, when the students arrived, IT staffers went to their rooms to help them set up their PCs, install software and add antivirus protections.

This kind of informal and intimate partnership between IT and end users is one of the things that prompts Daniel Thomas, assistant director of IT, to say, "I have a wonderful time here. I absolutely love what I do."

To be sure, Thomas says, there are drawbacks to working in academic IT: The pay generally is lower than it is in the corporate world, and small IT budgets force you to keep technology for longer. But Thomas says he takes pride in doing more with less. "We are always looking for the value proposition, and we are able to develop a lot of skills to do things efficiently," he says.

"We are really able to involve ourselves in the life of the university," explains Thomas, who manages the database group and also serves as a user liaison for reporting. Recently, for example, he rearranged computer processing schedules and came in on a Saturday to meet a special, one-time reporting requirement for the dean of law school admissions.

Juan Abreu, the first-shift supervisor in computer operations, started at the university as a data entry operator in 1978, right out of high school. Abreu agrees he could make more money elsewhere, but, he says, "the corporate world is all about dollar signs, especially after you hear about Enron and all that stuff. But here, it's a family atmosphere."

Abreu and others in IT have high praise for M. Lewis Temares, CIO and dean of the College of Engineering. "Temares is an example of the ultimate work ethic and professionalism," Abreu says. "He gives us the direction to go in, but then he trusts us to do whatever we need to do. And he has an open-door policy."

That open door helps him as well as his employees, Temares says. "The people here are great. They force me to push myself harder; they force me to think outside the box."

Temares, a statistician by training, acknowledges that he delegates the techie stuff to his subordinates.

"The standard joke here is, if something happens to the computer, don't let Temares touch it," he says. "And if my people have a new technology that's supposed to be customer-friendly, give it to Temares first, because if he can do it, anyone can do it."

Temares offers this insight about the role of the CIO: "Too many CIOs focus on technology, and they forget to focus on people. Sometimes their bosses expect them to do that."

His focus on people, Temares, says, begins at recruiting time. "The first thing we look at is, Will this person fit into our team? It's hard to check moral values, but we do what we can to figure out if the person will follow what we think is an appropriate path and appropriate ethics."

Temares says he understands that employees might sometimes leave for higher pay elsewhere.

"That's not bad. I understand the facts of life," he says. "But if we train them the right way, they can make us look good in terms of recruiting and hiring new people."

And some of them come back to the university, Temares says. "I give everybody one mulligan," he says. **54403**

American Fidelity Assurance staffers: Pat Baksh, CIO John Schille (seated), Clendon Rice and Kristie Johnson.

JOSEPH MILLS

No. 3

American Fidelity Assurance Co.

Family focus at this Midwest insurance company makes for a satisfied IT workforce. And management's commitment to flexible schedules inspires loyalty. By Linda Rosencrance

WHY THEY'RE TOPS

- Ranked No. 2 in retention
- IT turnover was 7% in 2004
- Ranked No. 3 in career development
- 25% of IT workers were promoted last year

AT AMERICAN FIDELITY Assurance Co., it's all about family and flexibility.

Not only is American Fidelity a family-owned insurance company — CEO Bill Cameron is running the Oklahoma City business founded by his grandfather and father — it treats all its employees, or colleagues, as they're called, like family as well.

"The company is very people-oriented and very family-oriented," says Clendon Rice, director of corporate technology resources, who has been at American Fidelity for 20 years. "In my area, we try to do one or two family events every year so we can get to know the families. We have barbecues, picnics [and] pool parties, and we go bowling."

When the company hires colleagues, it looks for people who fit with its family-oriented culture, according to Jeanette Rice (no relation to Clendon), senior vice president of corporate and human resources.

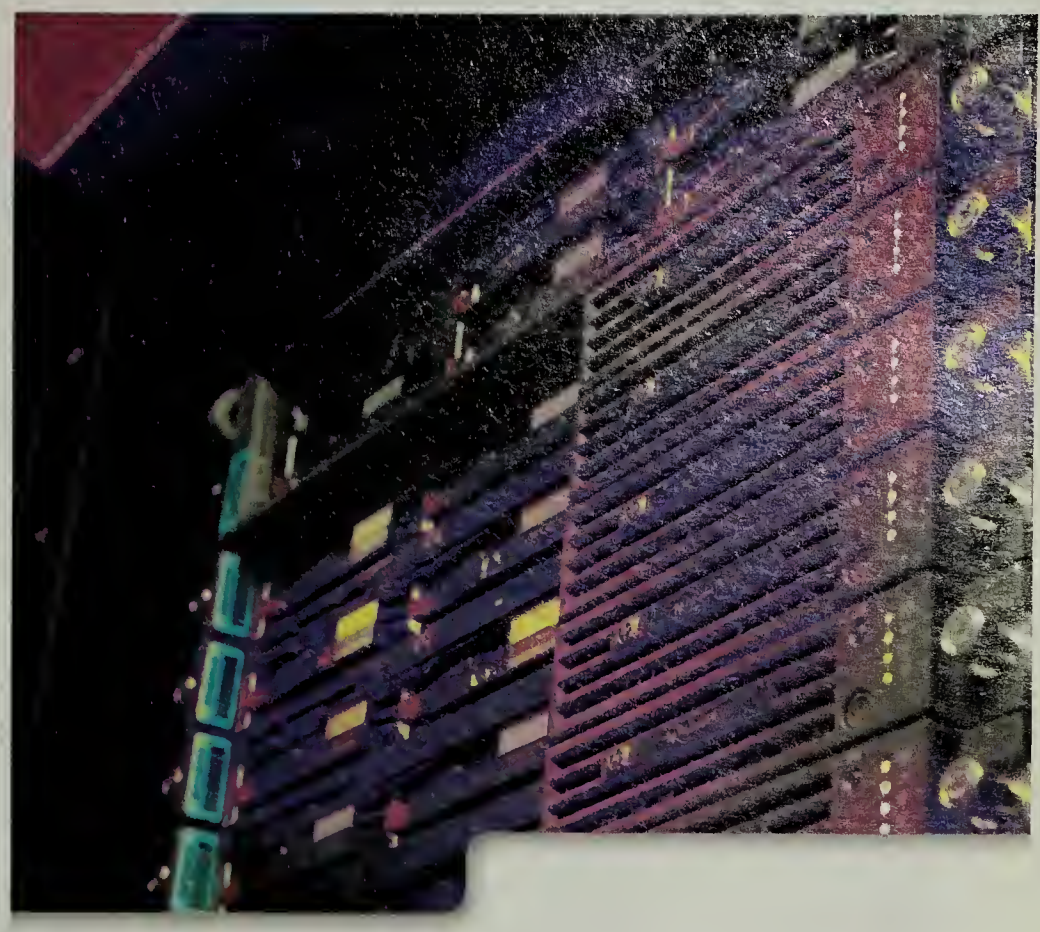
Senior systems analyst Kristie Johnson, who has been at American Fidelity for 14 years, praises the company's focus on family as well as its commitment to flexibility. "About five or six years ago, I decided I needed to be home after school with my teenage children. They had the flexibility to allow me to start working part time," she says. "I'm still in a senior analyst position. I manage projects and do all that I'm able to keep up with on a part-time basis. They were willing to work with me, and I think that's just wonderful."

Johnson says the company actually let her take one entire summer off, even though she was required to officially quit. "They held my position open for me; the only thing I lost — they reinstated all of my benefits — was one year of seniority," she says.

Jeanette Rice says flexible schedules like Johnson's require a manager's approval. "It's more of department-by-department based on customer need," she says. "We leave it up to managers — if they want to keep a job open and the colleague is a great colleague for us, then, hey, let's go for it."

When systems analyst Pat Baksh arrived in the U.S. from Trinidad and Tobago in 1996, her colleagues helped her family get settled in a new community. They even gave her time off to go apartment hunting, she says.

"One of the things I do enjoy right now is the flexibility that my boss gives me," Baksh says. "That's one of the things I like about working at American Fidelity — they have a heart, and they're flexible." **54407**



Building The Digital Enterprise

Aflac is committed to leading the way in giving our company and our clients a technological advantage.

Interested in helping us?
Apply online at
aflac.com

Aflac™

No. 4

American Century Investments

Managers at this investment firm open career doors for their IT staffers by offering training, new job opportunities and skills guidance.

By Todd R. Weiss

DON IPOCK

American Century staffers Patti Aenchbacher, Larry Thomas and Jane Foreman.

WHY THEY'RE TOPS

- Ranked No. 3 in retention
- Only 4% employee turnover
- Ranked No. 5 in benefits
- Ranked No. 4 in career development

WHEN AMERICAN CENTURY Investments LLC began its IT internship program in 1999, Patti Aenchbacher was one of its first hires, joining the database administration team.

Although it was Aenchbacher's first experience as an IT professional, she says her time as an intern showed her that the company was the place for her. Aenchbacher joined Kansas City, Mo.-based American Century full time after graduating from the University of Kansas in 2000, and today she is a project management specialist.

In those few short years, American Century has helped Aenchbacher grow her IT career. First, she continued on as a database administrator, then she decided to pursue project management. Aenchbacher's manager worked with her to create the job that she has held since January 2004.

"I appreciate the opportunities that management will work with you to provide," she says.

Now the company is not only encouraging Aenchbacher to get her project management certification, but it's also paying for it and a week-long preparation class.

Another American Century perk is its fledgling job-rotation program that allows longtime IT workers to try different assignments to gain new skills.

"A lot of people have been in IT a long time," says Aenchbacher. "Maybe they love their jobs, but they do want to do something different without having to leave the company."

Chief Technology Officer Bob Sauvageau says about two-dozen people participate in the job-rotation program, but it will soon expand. "If anything, I think it's going to keep people motivated," he says. "With low turnover, not a lot of spots open up, so there aren't a lot of opportunities to move around in the organization."

Sauvageau says when he joined the company nine years ago, he immediately realized that its ethics rules weren't just words on paper. "These are guiding principles on how we treat our customers and each other," he says. "We see [our workers] as people, with their own hopes and dreams. I think that makes a big difference in how we interact with folks."

American Century offers a host of other career-growth and training programs, with separate paths for management and technical training.

The Best Places recognition, says Sauvageau, "affirms for me that we're doing a lot of things right. People like to work here, but when you walk around our halls and talk to people, it's more powerful than that. People are proud to work here." 54406

verizon wireless
We never stop working for you.®

At Verizon Wireless, we happen to get excited by wireless technology and can't wait to make our network – which is already the best – even better. Right now, we're actively seeking people who share our passion and are ready to get involved with major initiatives. Visit our website for details.

Norman

ANOTHER DAY. ANOTHER ACCOLADE.

To start your own success story,
submit your resume at:
www.verizonwireless.com/careers

Own Your Career.

Verizon Wireless is an equal opportunity employer, m/f/d/v
We proudly service our customers from here in the USA

2nd Annual

DMTF

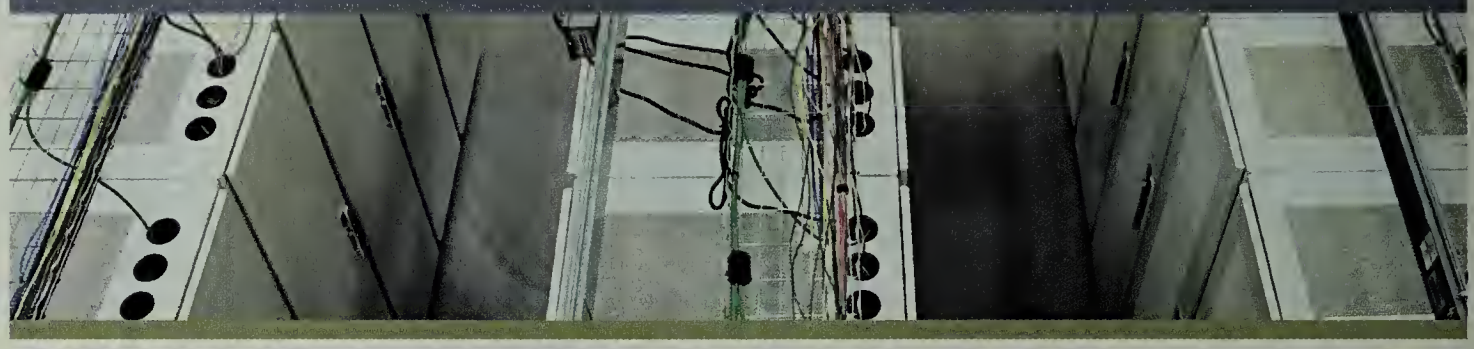
ENTERPRISE MANAGEMENT WORLD

SOLUTIONS FOR THE DATA CENTER

COMPUTERWORLD

Mark Your Calendar!

September 12-14, 2005 • Marriott Bethesda North Conference Center, Bethesda, Maryland



Featured Speakers Include:

JIM HULL
Vice President, Engineering Services
Mastercard International

JAIME SGUERRA
Second Vice President & Chief Architect
Guardian Life

JERRY BARTLETT
Vice President, Application Development
Ameritrade

BOB CARROLL
Chief Information Officer
Apollo Group (The University of Phoenix)

CINDY HUGHES
Chief Information Officer
Maryland Automobile Insurance Fund

MICHAEL CRISAFULLI
Vice President, Core Services
AOL Systems Operations

Are you responsible for managing your company's data center assets? Want to exchange innovative ideas and strategies with other executives who share the same objectives? Then attend Enterprise Management World, where you'll network with and learn from renowned experts and the nation's top user executives.

The Leading Conference for:

- Enterprise IT Management
- Data Center Management
- Networked Server and Storage Management
- Network and Communications Management
- Infrastructure and Data Architects
- Systems Integration Specialists
- Enterprise Security Management

To register or for more information, visit **www.emwusa.com/cw**

Attendees at Enterprise Management World 2004 saw solutions from:

PLATINUM SPONSORS

APC Legendary Reliability · CommVault Unified Data Management · DELL · EMC² where information lives · VERITAS

GOLD SPONSORS

hp invent · intel

SILVER SPONSORS

Cisco Systems · ORACLE · WBEM SOLUTIONS

ASSOCIATE EXHIBITORS

CIENA · LANDesk · smarts · uXcomm

MEDIA & ASSOCIATION SPONSORS

COMPUTERWORLD · CUTTER · IDC · ITmanagement

"BEST PRACTICES" AWARDS PROGRAM SPONSORED BY:

EMC² where information lives

For sponsorship opportunities at this year's event, call Leo Leger at 508-820-8212.

Got an award-worthy data center project?

Submit it for consideration by August 12th!

COMPUTERWORLD ENTERPRISE MANAGEMENT WORLD DMTF
Best Practices IN ENTERPRISE MANAGEMENT
AWARDS PROGRAM

Visit www.emwusa.com/cw

2005 Awards Program sponsored by EMC² where information lives

Co-Owned and Endorsed by DMTF

Co-Owned and Produced by COMPUTERWORLD

Network Appliance IT employees "love what they do, and that shows," says Kelvin Mayo (far right). He is joined, from left, by Carrie Rushing, Mike Ryan, Ric McCormick and Mike Peters.

ANNE KNUDSEN

No.5

Network Appliance

At this California-based technology provider, the IT department is treated as an asset to the business – not as merely a cost center. And technology rules supreme.
By Gary H. Anthes

WHY THEY'RE TOPS

- Ranked No. 8 in retention
- Ranked No. 8 in training
- Training budget of $3,000 per IT employee per year
- Eight training days offered per IT employee per year

SILICON VALLEY, entrepreneurship, IT innovation, stock options — it all seems so 1990s. But that's what you'd get today if you worked at Network Appliance Inc. in Sunnyvale, Calif.

And the employees at NetApp, as the provider of network storage hardware, software and services is known, say they wouldn't have it any other way.

"We look for people who are very motivated and entrepreneurial, who will work on their own without a structured blow-by-blow for each individual," says Ric McCormick, senior director of business process and systems.

The number of U.S. IT employees at the $1.2 billion company jumped from 114 to 148 in 12 months, while the number of offshore contract workers in IT zoomed from 50 to 125. That reflects the growth of the company, McCormick says, but there's more to it.

"There's a philosophy at NetApp to invest in the IT organization," he says. "It's not just looked at as a cost center, but as something that adds value to the business." That philosophy radiates down from the CEO, he adds.

NetApp is an avid user of its own data-storage products, and IT workers are frequently called on to meet with customers and sales prospects to explain how it all works.

"Sometimes in IT, it's hard to directly link what you are doing to what's occurring from a revenue standpoint," McCormick says. "But we know when a sale comes in, or when a customer problem that we were involved in gets resolved. We find that quite fulfilling."

"People love what they do, and that shows," agrees Kelvin Mayo, manager of systems infrastructure. "At a lot of other companies, you don't have the visibility or the direct impact on sales cycles as we do here. Top management understands that; they know IT is an asset to the business."

At a time when stock options are falling out of favor, NetApp still offers options to all new employees and then gives stock bonuses for superior performance. "We also have peer recognition awards for people who go above and beyond the call of duty," Mayo says.

Those things foster innovation, he says, adding, "Your ability to be an independent thinker and create new methodologies or tools is something we appreciate and focus on when we look for a new employee." **54408**

DISCOVER. Something Better.

It's time to celebrate...

...We have been recognized for three consecutive years by *Computerworld* as one of the "Top 100 Best Places to Work in IT."
Talk about the perfect fit for tech-savvy professionals like you... we offer the resources, opportunities and talented peers that you would expect from a leading financial services company. Here you'll be a part of a team who share in your passion for work, success and fun. You will enjoy generous benefits, paid time off and much more. There really is something better at Discover Financial Services, so join in the celebration.

Work for a financial leader in one of the following available positions:

- Websphere Engineers
- J2EE/J2SE Java Developers
- Unix Engineer/Business Analyst
- Unix Engineers
- Strategic Multiple Application Project Managers

To apply and learn more, please go to our career website at:

Careers at: www.discoverfinancialjobs.com

DISCOVER® FINANCIAL SERVICES

We are an equal appartunity employer. © 2005 Discover Financial Services, Inc.
Full benefit eligibility based on employment classification and hire date.

PAY MORE ATTENTION TO SERVERS BEFORE YOU BUY THEM.

SO YOU CAN PAY LESS ATTENTION

IBM eServer™ xSeries®

Affordable, reliable, easy to manage: eServer xSeries with Intel® Xeon™ Processors

IBM eServer **xSeries 226 Express**

An entry-level server that offers the reliability and performance needed for business-critical computing. Easy set up, deployment, and access to all major system components.

System features

- Up to two Intel Xeon Processors 3GHz/2MB
- Two-way tower with rack capability
- Up to 7 hot-swappable SCSI hard disk drives
- Two 73GB HS SCSI HDD standard
- Limited warranty: up to 3 years on-site[3]

From **$1,639***[4]

(Other configurations as low as **$1,229**[4])

IBM Financing Advantage
Only **$45** per month[5]

IBM eServer **xSeries 346 Express**

Help maximize performance and improve availability in a rack dense environment with Xtended Design Architecture.™ Includes features like Calibrated Vectored Cooling, an IBM innovation that helps to cool your system and improve uptime.

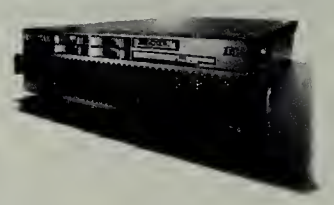
System features

- Up to two Intel Xeon Processors 3GHz/2MB
- Two-way 2U rack server
- Up to 2GB DDR2 memory using 8 DIMM slots with enhanced memory
- Limited warranty: up to 3 years on-site[3]

From **$3,999***[4]

(Other configurations as low as **$2,219**[4])

IBM Financing Advantage
Only **$109** per month[5]



IBM eServer **xSeries 366 Express**

With the power of 3rd generation Enterprise X-Architecture,™ it sets a new standard for 4-socket, 64-bit servers. Delivers increased performance, systems manageability, and simultaneous support for 32 and 64-bit apps.

System features

- Up to four 64-bit Intel Xeon Processors MP 3.66GHz
- 64GB DDR memory
- 4GB memory expandable to 64GB
- Six 64-bit Active PCI-X 2.0
- IBM Director
- Calibrated Vectored Cooling
- Limited warranty: up to 3 years on-site[3]

From **$13,779***[4]

(Other configurations as low as **$6,999**[4])

IBM Financing Advantage
Only **$379** per month[5]

IBM eServer BladeCenter™

Flexible and easy to use

IBM eServer **BladeCenter HS20 Express**

Designed to support the Intel Xeon Processor and packed with high-availability features, the eServer BladeCenter HS20 with an industry-leading modular design delivers density without sacrificing processor performance.

System features

- Up to two Intel Xeon Processors 3.20GHz/2MB
- Up to 14 blades per chassis
- Supports both 32 and 64-bit applications
- IBM Director
- Limited warranty: up to 3 years on-site[3]

From **$2,979***[4]

(Other configurations as low as **$1,839**[4])

IBM Financing Advantage
Only **$82** per month[5]

IBM TotalStorage®

Simplify storage management to help improve productivity

IBM TotalStorage **DS300 Express**

Entry-level, cost-effective SCSI storage systems designed to deliver advanced functionality at a breakthrough price. Provides an exceptional solution for work group storage applications, such as e-mail, file, print, database and Intel Xeon Processor–based servers.

System features

- 3U rack-mount entry level
- Support for up to 14 Ultra320 SCSI disk drives
- Starts at 584GB / Scales to 4.2TB
- Limited warranty: 1 year on-site[3]

From **$5,355***

(Other configurations as low as **$2,995**)

IBM Financing Advantage
Only **$147** per month[5]

*All prices are IBM's estimated retail selling prices that were correct as of June 3, 2005. Prices may vary according to configuration. Resellers set their own prices, so reseller prices to end users may vary. Products are subject to availability. This document was developed for offerings in the United States. IBM may not offer the products, features, or services discussed in this document in other countries. 1. IBM Director is not available on TotalStorage products. 2. IBM Director must be installed. Products included in IBM Express Servers and Storage may also be purchased separately. 3. Telephone support may be subject to additional charges. For on-site labor, IBM will attempt to diagnose and resolve the problem remotely before sending a technician. 4. Prices subject to change without notice. Price may not include a hard drive, operating system or other features. Contact your IBM representative or IBM Business Partner for the most current pricing in your geography. 5. IBM Global Financing terms and conditions and other restrictions

TO THEM AFTER.

With IBM® Express Servers and Storage™ offerings designed for mid-sized businesses, help is here.

You've already got a zillion things that require your attention – you shouldn't have to worry about your systems. That's why IBM Express products offer reliability features, which help them do their job so you can focus on yours.

Take IBM Director, which comes standard.[1] It can proactively notify you of a potential problem – up to 48 hours in advance. Or our Calibrated Vectored Cooling feature available on select xSeries systems. It can cool your system more efficiently. This means more features can be packed into a smaller server – for more functionality and greater flexibility.

It's just an example of our self-managing features that help you take back control of your IT. Which can help lower your maintenance costs, too. Because with IBM Express Servers and Storage, innovation comes standard. It's not optional. Plain and simple, it's built in.[2]

There's also one more great feature – your IBM Business Partner. Which means you can have a one-to-one chat with someone who understands your industry and your business – and who's located in your neck of the woods. And for mid-sized businesses, that's really big help in a really big way.

☎ THE WORLD'S HELP DESK

Learn more about our full range of IBM Express products and financing options. And find the IBM Business Partner near you – who can help you choose the right system to meet your requirements.

ibm.com/eserver/helpishere1

1-800-IBM-7777

mention 104CE01A

SIZE OF BUSINESS

HELP FOR ANY SIZE PROBLEM

IBM

IBM TotalStorage **DS400 Express**

With advanced functionality, the DS400 provides an exceptional solution for work group storage applications. It supports Intel Xeon Processor-based servers and offers Fibre Channel drives designed for high performance, and hot-swap Ultra320 SCSI drives designed for high reliability.

System features

2GB Fibre Channel storage systems area network (SAN)

3U rack-mount entry level

Starts at 584GB / Scales to 12TB

Limited warranty: 1 year on-site[3]

From **$8,495***
(Other configurations as low as **$4,995**)

IBM Financing Advantage
Only **$234** per month[5]

may apply. Monthly payment provided is for planning purposes only and may vary based on customer credit and other factors. Rates and offerings are subject to changes, extension or withdrawal without notice. IBM, eServer, BladeCenter, xSeries, TotalStorage, IBM Express Servers and Storage, Enterprise X-Architecture and Xtended Design Architecture are trademarks or registered trademarks of International Business Machines Corporation in the United States and/or other countries. Intel, Intel Inside, the Intel Inside logo, and Intel Xeon are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries. Other company, product and service names may be trademarks or service marks of others. © 2005 IBM Corporation. All rights reserved.

COMPUTERWORLD 100 BEST PLACES TO WORK IN IT 2005

How They're Chosen

FOR THE 12TH CONSECUTIVE YEAR, *Computerworld* conducted a survey to identify the 100 Best Places to Work for IT professionals.

In November 2004, *Computerworld* accepted nominations. To qualify to complete the company survey, participating companies, both public and private, had to have 2004 revenue of $250 million or greater and they had to employ a minimum of 500 people in the U.S. and have at least 100 IT employees in the U.S.

Participants submitting nominations were asked to provide the name and contact information of an appropriate individual at their company who was familiar with or had access to employment statistics and financial data, as well as information about benefits policies and programs for the IT department and the company as a whole.

In January 2005, contacts at the nominated companies received a 100-question survey asking about their organizations' average salary and bonus increases, the percentage of IT employees receiving promotions, IT staff turnover rates, training and development opportunities, and the percentage of women and minorities in IT staff and management positions. In addition, information was collected on how the organizations reward outstanding performance, how their retention programs are structured and what benefits they offer, ranging from elder and child care to flextime and tuition reimbursement for college and technology certification courses.

All participating companies were required to obtain feedback from their employees. Upon completion of the company survey, company representatives were e-mailed instructions on selecting a random sample of their U.S.-based full- and part-time IT staffs to fill out an employee survey. The responses to the survey went directly to a third-party research firm.

Topics covered in the employee survey included satisfaction with training and development programs, base salary, bonuses, health benefits and work/life balance. In addition, employees were asked to rate morale in their IT departments and the importance of various benefits; they were also asked to rate the degree to which they agreed with a variety of statements related to subjects ranging from career growth to management's fair and equal treatment of employees.

A total of 20,435 IT professionals responded to the employee survey from the final 100 companies selected.

The nomination survey, company survey and employee survey were all conducted via the Internet. The company survey and employee survey portions of the research ended in March 2005. In scoring the responses from the company and employee surveys, company results were weighted based on employees' importance ratings from the employee component. Approximately one-half of the total scoring system was based on employee responses, with the remainder based on the survey of the company's benefits and other programs.

This year's survey process was managed by Michele Peoples of IDG Research. **54618**

– Mari Keefe and Ellen Fanning, Best Places program coordinators

	COMPANY	TOTAL EMPLOYEES	IT EMPLOYEES	IT EMPLOYEE TURNOVER	IT EMPLOYEE PROMOTIONS	TRAINING DAYS OFFERED PER IT EMPLOYEE	WHAT'S SPECIAL?
1	**Quicken Loans Inc.** Livonia, Mich. www.quickenloans.com	2,437	175	9%	15%	5	This online lender offers personal development training for its IT workers, as well as a leadership training program. IT employees can receive a year-end performance-based bonus of up to 25% of their salary. Managers reward exceptional performance with spot bonuses – some as much as $10,000. Merit increases average 4% to 6%.
2	**University of Miami** Coral Gables, Fla. www.miami.edu	9,783	284	6%	13%	8	This university's main campus is located on 260 acres in Coral Gables, a suburb just south of Miami. Employees are offered full tuition for their dependents. IT is also offered flexible work hours and telecommuting. Employees who develop innovative projects are rewarded with promotions, merit increases in salary and public recognition.
3	**American Fidelity Assurance Co.** Oklahoma City www.afadvantage.com	1,446	130	7%	25%	7	This provider of voluntary supplemental life and health insurance serves 1.5 million customers nationwide. Its IT workers can participate in a variety of company-sponsored fund-raising activities and volunteer efforts. Other benefits include a profit-sharing bonus, flexible schedules and an on-site fitness center that offers aerobics classes, yoga, step classes and individualized weight training with a personal trainer.
4	**American Century Investments** Kansas City, Mo. www.americancentury.com	1,883	308	4%	30%	10	The IT department at this mutual funds administrator has its own Web site, which complements the company site with department-specific updates and information. IT also publishes its own newsletter, offers frequent roundtable discussions with IT executives and sends out bimonthly "What's New in IT?" e-mails.
5	**Network Appliance Inc.** Sunnyvale, Calif. www.netapp.com	2,000	148	4%	11%	8	Founded in 1992, this storage vendor's products include specialized hardware, software and services, providing storage management for open network environments. IT management focuses on promoting from within rather than hiring senior people from outside the company. Turnover has remained at or below 4% over the past four years.
6	**Qualcomm Inc.** San Diego www.qualcomm.com	7,000	751	5%	10%	3	This company licenses the CDMA semiconductor technology and system software it pioneered to more than 100 equipment and cell phone makers. IT workers regularly move within the department on different assignments, keeping employees and teams fresh. Company head count is expected to increase more than 30% this year.
7	**Minnesota Life Insurance Co.** St. Paul, Minn. www.minnesotalife.com	2,318	382	6%	10%	8	This company offers individual and group life and disability insurance and annuities. Most of its IT hiring is at the entry level; the goal is to train employees and help them grow into senior technical and managerial positions. Benefits include on-site child care, continuing education, technical and managerial training, and degree and certification reimbursement.
8	**University of Pennsylvania** Philadelphia www.upenn.edu	17,300	275	4%	2%	3	This Ivy League university was founded in 1751 by Benjamin Franklin. Its highly diverse IT workforce includes people from dozens of countries. The IT group actively supports diversity through formal channels, such as the Cornell Interactive Theater program, and through informal channels, such as encouraging employees to celebrate their heritage.
9	**Universal Health Services Inc.** King of Prussia, Pa. www.uhsinc.com	35,000	334	8%	18%	4	One of the largest for-profit hospital operators in the U.S., Universal Health Services owns or operates four dozen acute care hospitals. IT employees are given a variety of job assignments and are encouraged to pursue educational opportunities. The Service Excellence Committee, made up of six IT employees, helps maintain principles of service and ethical management.
10	**The Mitre Corp.** McLean, Va. www.mitre.org	5,782	275	1%	11%	6	This not-for-profit organization provides IT consulting for several government agencies. A retirement program allows employees to contribute up to the maximum amount allowed by law, with Mitre contributing up to approximately 11% of each worker's salary. Work/life balance programs include flextime, teleworking, part-time employment and job sharing.

	COMPANY	TOTAL EMPLOYEES	IT EMPLOYEES	IT EMPLOYEE PROMOTIONS	IT EMPLOYEE TURNOVER	TRAINING DAYS OFFERED PER IT EMPLOYEE	WHAT'S SPECIAL?
11	**Automotive Resources International** Mt. Laurel, N.J. www.arifleet.com	846	104	10%	0%	4	This fleet leasing and management company offers services at 15 locations in the U.S., five in Canada, one in Mexico and another in Puerto Rico. Its internal Partners in Excellence program seeks to give workers at all levels of the company the tools to better serve customers, whether they're external clients or internal employees. The IT unit has never had a layoff, and there was no IT employee turnover in 2004.
12	**FedEx Corp.** Memphis www.fedex.com	250,713	5,948	4%	2%	8	FedEx's FedEx Express unit delivers some 3 million packages each day, and its FedEx Ground unit provides ground delivery of small packages in North America. Compensatory time off is provided to employees who cover on-call shifts. The "Hall of Fame" quarterly recognition program honors IT employees for innovative solutions to business problems.
13	**J.B. Hunt Transport Services Inc.** Lowell, Ark. www.jbhunt.com	16,000	301	15%	9%	10	One of the largest truckload carriers in the U.S., J.B. Hunt has a fleet of tractors, trailers and containers and provides dry-van truckload service throughout the U.S. and in Canada and Mexico. All salaried IT employees are eligible for one of three levels of bonus. The plan is based on targets for corporate earnings per share, which are determined at the beginning of the year. Bonuses are paid as a percentage of salary.
14	**Philip Morris USA Inc.** Richmond, Va. www.philipmorrisusa.com	11,709	452	11%	9%	3	The No. 1 U.S. cigarette maker, Philip Morris accounts for about half of the country's total cigarette shipments. The company contributes 15% of an employee's eligible compensation to a profit-sharing program. In 2004, Philip Morris implemented a three-day leadership development program for its IT managers that was facilitated by IT senior management.
15	**Harrah's Entertainment Inc.** Las Vegas www.harrahs.com	48,000	286	18%	7%	10	Harrah's manages 25 casinos in 12 U.S. states under the Harrah's, Harveys, Rio and Showboat brand names. The company offers flexibility within the workday but also flexibility and choice with the work location. Harrah's collects employee feedback through an annual corporate employee opinion survey as well as an exclusive IT employee survey.
16	**Royal Caribbean Cruises Ltd.** Miami www.royalcaribbean.com	4,010	316	8%	3%	7	The world's second-largest cruise line operates 29 ships with more than 60,500 berths. The firm's two cruise brands, Celebrity Cruises and Royal Caribbean International, carry about 3.5 million passengers a year to around 160 destinations. Employees are encouraged to take vacations on the cruise line, at discounted rates.
17	**USAA** San Antonio www.usaa.com	21,896	2,182	15%	8%	12	This mutual insurance company serves some 5 million customers, primarily military personnel and their families. New benefits programs include personal financial planning services, enhanced weight management and fitness programs and enhanced health risk assessments. Executive IT managers lead some of the USAA training courses.
18	**Grant Thornton LLP** Chicago www.grantthornton.com	3,881	113	12%	15%	5	This firm's parent company, Grant Thornton International, is one of the world's largest accounting firms. The U.S. subsidiary has approximately 50 U.S. offices. IT workers are offered a range of options to help balance their work and home lives, including compressed workweeks, part-time schedules and telecommuting.
19	**Assurant Solutions** Atlanta www.assurantsolutions.com	5,346	599	11%	6%	11	This insurance provider's employee committee organizes participation in community projects such as blood drives, Habitat for Humanity projects, disaster relief programs and fund raising efforts for inner-city initiatives. Amenities include subsidized on-site child care at the Miami campus. There are also company-subsidized on-site Weight Watchers meetings.
20	**Novartis Pharmaceuticals Corp.** East Hanover, N.J. www.novartis.com	12,290	417	13%	7%	10	This U.S. pharmaceuticals affiliate of Swiss drug giant Novartis builds bonuses into its IT project budgets for team members who successfully complete major initiatives. Celebratory events are also held for the achievement of key project milestones. Regular IT department meetings hosted by the CIO are open to all IT employees.
21	**Health Care Service Corp.** Chicago www.bcbsil.com	15,008	1,395	16%	8%	5	This insurance provider is made up of Blue Cross Blue Shield of Illinois, Blue Cross and Blue Shield of Texas, and Blue Cross and Blue Shield of New Mexico. Employees have an average tenure of 10 years. IT management supports workers with a learning environment to develop and enhance their skills.
22	**United Parcel Service Inc.** Atlanta www.ups.com	317,000	3,799	13%	2%	9	This package delivery company's IT group is involved in a program whose participants organize food drives, work in soup kitchens, mentor troubled youth and help improve impoverished communities. An IT mentoring program, begun in 1999, has successfully matched more than 290 pairs of mentors and mentees.
23	**PHH Mortgage Corp.** Mt. Laurel, N.J. www.phhmortgage.com	6,022	320	18%	15%	2	The popcorn maker is always on, and jeans and sneakers are the typical attire for IT workers at this mortgage financing company. Quarterly career coaching defines areas for improvement and recognizes performance milestones. Outstanding IT workers are honored through peer-nominated awards. An IT awards celebration is held semiannually.
24	**SAS Institute Inc.** Cary, N.C. www.sas.com	5,204	263	9%	9%	3	No Dilbertesque cube farm here – 99% of SAS workers have their own offices. Incorporated in 1976, SAS is the world's largest privately held software company, with nearly 10,000 employees in more than 200 offices worldwide. An on-site health care center at its world headquarters provides services at no cost to employees and their covered dependents.
25	**Sutter Health** Sacramento, Calif. www.sutterhealth.org	49,500	950	11%	3%	5	Organized in 1996 through the merger of Sutter Health and California Healthcare System, this is one of the nation's largest not-for-profit health care systems. The training allowance averages more than $4,000 per employee per year, and IT employees can earn professional credentials as well as participate in leading industry forums.
26	**Aflac Inc.** Columbus, Ga. www.aflac.com	3,948	444	13%	8%	4	One of the largest supplemental medical insurance providers in the U.S., Aflac covers special conditions, primarily cancer. The IT division has a dedicated training group that meets quarterly with IT managers to identify needs and develop training plans; their efforts include creating customized courses for employees.
27	**Marriott International Inc.** Washington www.marriott.com	124,766	968	9%	9%	5	Marriott is the No. 1 lodging company in the world. Its hotel brands include Courtyard, Fairfield Inn, Marriott, Renaissance, Residence Inn, SpringHill Suites and Ritz-Carlton. The average tenure of the IT department's 1,200 workers is just under nine years; the group has relatively low voluntary turnover.
28	**General Mills Inc.** Minneapolis www.generalmills.com	18,133	617	18%	4%	5	This food manufacturer is known for brands such as Betty Crocker, Pillsbury, Cheerios and Old El Paso. The company offers a special mentoring program for its female IT employees. An early-career rotation program provides an opportunity to have three job rotations in five years. On-site medical facilities fill prescriptions and offer health care and physical therapy.
29	**Verizon Wireless** Bedminster, N.J. www.verizonwireless.com	50,000	2,094	7%	6%	10	This wireless service provider has approximately 45.5 million customers nationwide. The company offers its IT workers a master of IT program through Stevens Institute of Technology. Student employees can take classes two nights a week following their regular workdays. Nineteen employees are expected to receive a master's degree this year.

SOURCES: COMPANY-SUBMITTED SURVEYS, COMPANY WEB SITES, HOOVERS.COM. FIGURES SHOWN REPRESENT INFORMATION COLLECTED AT THE TIME THE SURVEY WAS CONDUCTED IN JANUARY 2005.

HOW MANY PEOPLE DOES TO SUPPORT A SINGLE (THAT'S TOO MANY.)

With IBM® Express Servers and Storage™ designed for mid-sized businesses, help is here.

Servers should support a business, not the other way around. That's why IBM Express Servers have self-managing features: so that our servers can virtually run themselves. What's more, with IBM Express Servers and Storage, innovation comes standard. Take the OpenPower™ 710 Express, for instance. It's specially tuned for Linux® and offers the reliability of POWER5™ technology at a surprisingly low price.[1]

And while you can't be in two places at the same time, you might want to look into the innovative server feature that can. For example, the remarkable Advanced POWER™ Virtualization option – it lets one OpenPower 710 Express act as many virtual ones.

On top of that there's IBM TotalStorage® products, which offer a wide range of disk, tape, and storage software solutions – so you can choose the right options to meet the growing needs of your company.

There's also one more great feature – your IBM Business Partner. Which means you can talk to someone who understands your industry and your business – and who's located in your neck of the woods. And for mid-sized businesses, that's really big help in a really big way.

IBM eServer™ OpenPower™

Tuned for Linux

IBM eServer **OpenPower 710 Express**

System features

- Increase computing power, availability and scalability in a rack dense environment
- Ideal for consolidation of infrastructure workloads (Web serving, file, print, security applications)
- Robust 64-bit mainframe-inspired POWER5 systems
- 2-way 19" rack server
- Up to 32GB of memory
- Optional Advanced POWER Virtualization[1]
- DB2® Express Discover CD
- Limited warranty: up to 3 years on-site[2]

From **$4,477***

IBM Financing Advantage
Only **$124** per month[3]

*All prices stated are IBM's estimated retail selling prices that were correct as of May 6, 2005. Prices may vary according to configuration. Resellers set their own prices, so reseller prices to end users may vary. Offers are for business customers only and are subject to availability. This document was developed for offerings in the United States. IBM may not offer the products, features, or services discussed in this document in other countries. [1]The Linux operating system for the OpenPower 710 Express must be purchased separately. Price does not include virtualization option. [2]Telephone support may be subject to additional charges. For on-site labor, IBM will attempt to diagnose and resolve the problem remotely before sending a technician. [3]IBM Global Financing terms and conditions, and other restrictions may apply. Monthly payments provided are for planning purposes only and may vary based on customer credit and other factors. Rates and offerings are subject to change, extension or withdrawal without notice. [4]Customer Replaceable Unit (CRU) service is available in most

IT TAKE SYSTEM?

IBM

IBM TotalStorage®

Simplify storage management to improve productivity

IBM TotalStorage **3580 Express**

The 3580 Express helps address your growing storage requirements and the problem of shrinking backup windows. It supports cost-effective backup, save and restore, and data archiving.

System features

- Built on Ultrium® 3 technology
- Read/write compatible with cartridges written by Ultrium 2 drives
- Read compatible with Ultrium 1 cartridges
- Up to 400GB cartridge capacity. Up to 800GB with 2 to 1 compression
- Limited warranty: 3 years[4]

From **$5,850***

IBM Financing Advantage
Only **$167** per month[3]

IBM TotalStorage **DS4300 Express**[5]

With a scalable design, the DS4300 Express is designed to provide a reliable and affordable storage option to help simplify your data management needs.

System features

- 2GB Fibre Channel SAN-ready
- 3U rack mount entry level
- Scales to 33.6TB
- Supports up to 112 Fibre Channel disk drives – with optional EXP710 expansion units[6]
- Heterogeneous OS support
- Limited warranty: 3 years on-site[2]

From **$8,655***

IBM Financing Advantage
Only **$238** per month[3]

☎ THE WORLD'S HELP DESK

Learn more about our full range of IBM Express products. And find the IBM Business Partner near you - who is IBM trained to know which systems meet your specific requirements.

ibm.com/eserver/helpishere2

1-800-IBM-7777

mention 104CE02A

SIZE OF BUSINESS

HELP FOR ANY SIZE PROBLEM

countries. [5]General product availability of IBM TotalStorage DS4300 Express is expected to be 6/17/05. [6]EXP710 expansion unit is not included in the price. MB, GB and TB equal 1,000,000, 1,000,000,000 and 1,000,000,000,000 bytes, respectively, where referring to storage capacity. Actual storage capacity will vary based upon many factors and may be less than stated. Some numbers for storage capacity are given in native mode followed by capacity using data compression technology. IBM, eServer, POWER5, OpenPower, IBM Express Servers and Storage, DB2, POWER and IBM TotalStorage are trademarks or registered trademarks of International Business Machines Corporation in the United States and/or other countries. Linux is a registered trademark of Linus Torvalds in the United States and other countries. Linear Tape-Open, LTO, and Ultrium are trademarks of Certance, HP and IBM in the U.S. and other countries. Other company, product, and service names may be trademarks or service marks of others. ©2005 IBM Corporation. All rights reserved.

Facts and Figures

THE TYPICAL BEST PLACE

Revenue: **$9.3 billion**

In business for **73 years**

34,629 U.S. employees

1,045 IT employees

34% of IT staff members are women

34% of IT managers are women

IT budget: **$291 million**

25% of IT staff members are minorities

18% of IT managers are minorities

Spends **$1,899** per IT employee on training

Offers **seven training days** annually for IT staff

Average workweek: **42 hours**

WHERE THEY ARE

North Central region:	34
South Atlantic region:	22
Mid-Atlantic region:	17
Pacific region:	11
South Central region:	8
New England region:	6
Mountain region:	2

WHAT THEY DO

12%	Finance industry
12%	Insurance/ real estate industry
8%	Computer-related services/consulting industry
7%	Manufacturing (non-computer-related) industry
6%	Health services industry

	COMPANY	TOTAL EMPLOYEES	IT EMPLOYEES	IT EMPLOYEE PROMOTIONS	IT EMPLOYEE TURNOVER	TRAINING DAYS OFFERED PER IT EMPLOYEE	WHAT'S SPECIAL?
30	**American Family Insurance Group** Madison, Wis. www.amfam.com	8,238	1,044	6%	5%	8	This company specializes in property and casualty insurance. One incentive for its 1,000-strong IT team links bonuses with the company's achievement against strategic business goals. A recent IT project has enabled customers to access account information, obtain insurance quotes or pay bills online. The company provides access to undergraduate and graduate school courses, with tuition reimbursement of up to $5,200 per year.
31	**Vision Service Plan** Rancho Cordova, Calif. www.vsp.com	1,962	240	5%	5%	3	This eye care benefits provider, which has 38 million members, has its headquarters in Rancho Cordova, a suburb of Sacramento. A recent internal survey reported 90% job satisfaction among IT employees. A "flexible resource" pool allows employees to work on new special projects.
32	**Ford Motor Co.** Dearborn, Mich. www.ford.com	144,000	3,433	9%	2%	20	This carmaker's brands are Ford, Lincoln, Mercury, Volvo, Jaguar, Land Rover and Aston Martin. Mentoring circles consist of a management mentor and up to seven mentees. Employees can pursue voluntary international service assignments that typically last two to three years. The company's IT Diversity Action Team hosts several functions throughout the year.
33	**Ohio Savings Bank** Cleveland www.ohiosavings.com	2,305	248	13%	8%	6	Founded in 1899, Ohio Savings Bank has more than 50 branches and loan offices. IT workers can meet with the chief technology officer at any time. Staff members can also meet directly with senior managers, without going through their immediate supervisors. The bank's IT and retail business units recently partnered to implement speech recognition in the call centers.
34	**Hilton Hotels Corp.** Beverly Hills, Calif. www.hiltonworldwide.com	68,885	533	14%	6%	15	This hotelier owns, manages and franchises hotels with brand names such as Hilton, Hampton Inn, Doubletree and Conrad. Through the Team Member Travel Program, all employees are eligible for travel benefits while vacationing. The bimonthly "IT InfoLetter" and periodic "IT InfoFlash" newsletters are authored by IT team members.
35	**Mount Carmel Health System** Columbus, Ohio www.mountcarmelhealth.com	9,095	131	8%	3%	2	This health care system serves the greater Columbus area and central Ohio. The IT department is offered services such as massages and manicures and takes part in on-site car washes and potluck celebrations. Senior leadership is supportive of the IT department's efforts; the team's skills are utilized to help further the organization's goals.
36	**Booz Allen Hamilton Inc.** McLean, Va. www.boozallen.com	14,317	199	6%	7%	10	Founded in 1914 by Edwin Booz, this management consulting firm offers strategic and technology consulting services. In 2004, 16 staff members pursued new careers within the IT department. Recently, IT management identified three new career tracks for IT workers in the areas of security, service operations and account management.
37	**Principal Financial Group Inc.** Des Moines www.principal.com	12,475	1,544	10%	7%	3	This administrator of employer-sponsored retirement plans opened the High Street Retreat in 2004 at its corporate campus in Des Moines, offering PCs with Internet access, a reading room, several built-in whiteboards and a variety of games. IT employees drive their own training, with computer-based courses, in-house classes and virtual university classes.
38	**Apollo Group Inc.** Phoenix www.apollogrp.edu	12,062	305	20%	3%	6	This for-profit education company gears its curriculum toward working adults, serving 267,900 students at campuses located in 39 states. An education program offers 100% tuition waivers to all full-time regular employees and 80% waivers to their spouses at Apollo Group's five learning institutions. Over the past five years, the IT team has quadrupled in size.
39	**CDW Corp.** Vernon Hills, Ill. www.cdw.com	3,839	167	10%	9%	6	This technology retailer sells more than 80,000 computer products, primarily through catalogs, phone sales and its Web sites. Each year CDW sponsors a holiday party and pays expenses for all employees and a guest to fly to and stay in Chicago for the event. All IT workers have comprehensive career development plans.
40	**MasterCard International Inc.** Purchase, N.Y. www.mastercard.com	2,743	1,992	9%	9%	5	This credit card company is owned by its 25,000 financial institution members worldwide. The company offers IT workers reduced work schedules, flexible scheduling and telecommuting. Twenty-six languages are spoken at its headquarters. Communication channels include quarterly meetings and face-to-face exposure to leaders from across the company.
41	**Nextel Communications Inc.** Reston, Va. www.nextel.com	19,733	1,024	17%	5%	8	This telecommunications provider offers business customers wireless phone service, two-way radio dispatch, paging and text messaging on one handset. IT management actively recruits top talent and promotes from within. The Employee Lifecycle Function program incorporates all facets of an employee's career, from recruiting to retirement.

A GREAT FUTURE IS IN THE CARDS.

Harrah's named one of the best I.T. places to work five years in a row.

Great customer service and a state-of-the-art I.T. infrastructure. You might not normally put those two ideas together, but they're the reason Harrah's is now the world's biggest gaming company. From real-time CRM systems to innovative gaming products, and everything in between, we have dozens of cool projects that apply your I.T. interests and skills to the exciting world of casino gaming.

If you're interested in working at what *Computerworld* magazine named one of the "Best Places to Work in I.T." for five years in a row, contact us now. We're looking for smart and passionate project managers, engineers, architects, developers and more. For more information on these exciting opportunities, please visit www.harrahs.com/itjobs.

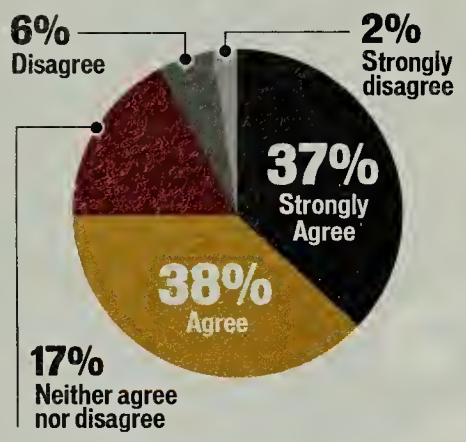
CAESARS® Harrah's® HORSESHOE® RIO®

WORLD SERIES POKER

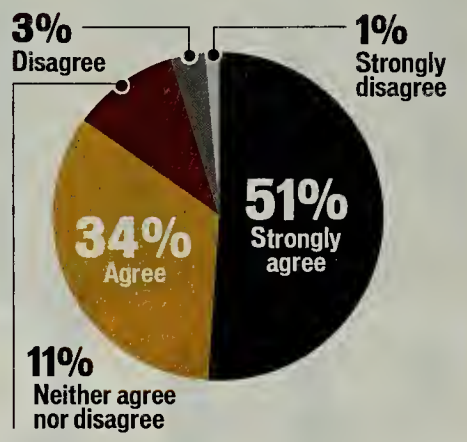
COMPUTERWORLD 100 BEST PLACES TO WORK IN IT 2004

Harrah's Entertainment is an Equal Opportunity Employer. Must be 21 or older to gamble. Know When To Stop Before You Start.® Gambling Problem? Call 1-800-522-4700. ©2005, Harrah's License Company, LLC

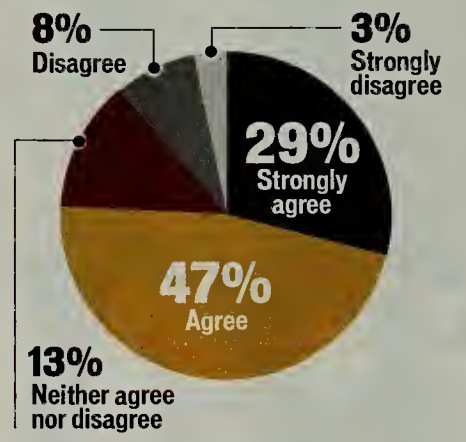
My company is a great place to work in IT



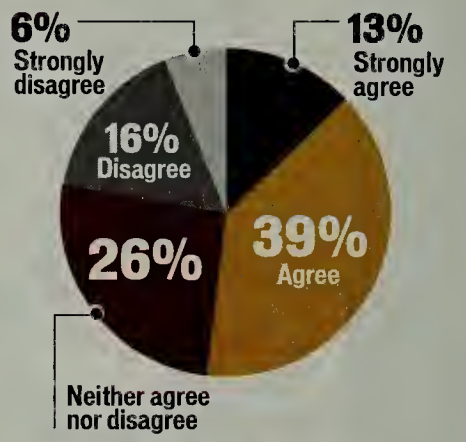
I am proud to work for my company



There are opportunities for career growth at my company

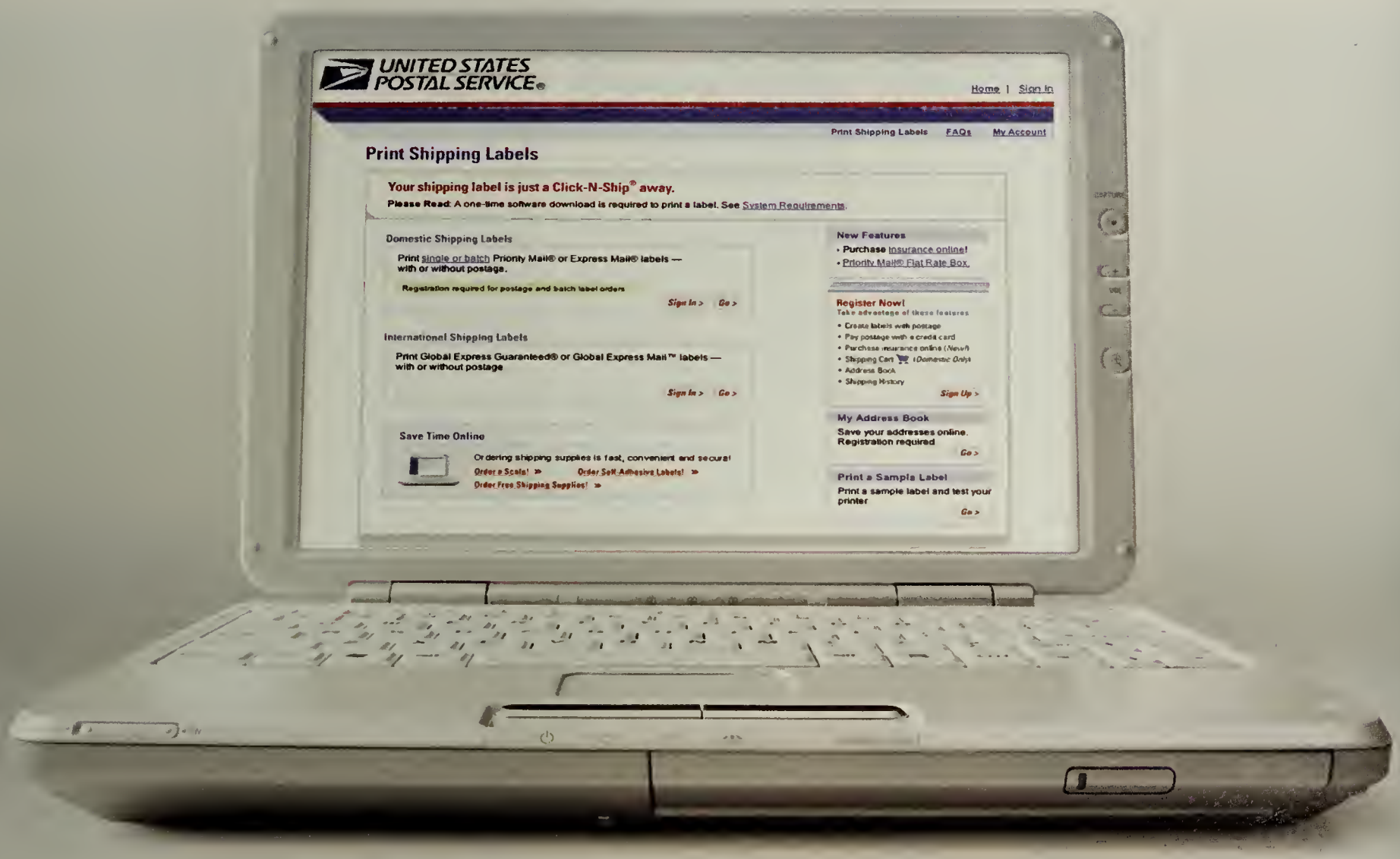


I have a well-defined career path



SOURCE: SURVEYS FROM 20,435 IT EMPLOYEES FROM THE FINAL 100 COMPANIES SELECTED

	COMPANY	TOTAL EMPLOYEES	IT EMPLOYEES	IT EMPLOYEE PROMOTIONS	IT EMPLOYEE TURNOVER	TRAINING DAYS OFFERED PER IT EMPLOYEE	WHAT'S SPECIAL?
42	**Partners HealthCare System Inc.** Wellesley, Mass. www.partners.org	3,965	976	9%	8%	6	Partners offers primary and specialist care, acute care hospitals and other services through Boston's Brigham and Women's Hospital and Massachusetts General Hospital. The IT staff recently rolled out an electronic administration tool at Brigham and Women's that uses computerized medicine cabinets, bar coding of patients, patient care staff and medicines to ensure that patients receive the right dose of the right medicine at the right time.
43	**BellSouth Corp.** Atlanta www.bellsouth.com	62,654	1,267	7%	3%	5	The local exchange carrier for nine states, from Louisiana to Kentucky, has more than 40 million customers. IT executives hosted several town hall meetings in 2004, presenting IT strategy and objectives and how they relate to corporate values. IT workers also are trained in disaster preparedness, and some have been instrumental in local disaster relief efforts.
44	**LexisNexis Group** Miamisburg, Ohio www.lexisnexis.com	6,900	759	2%	3%	5	A unit of publishing giant Reed Elsevier Group, this online legal research system, launched in 1973, offers subscribers access to thousands of newspaper, magazine and journal articles through the Internet, CD-ROMs and books. IT workers have access to up-to-date technology and to training and development programs. Also offered: company-sponsored activities (organized sports and volunteer activities), an employee workout room and company matching for charitable donations.
45	**National Information Solutions Cooperative Inc.** Mandan, N.D. www.nisc.coop	540	370	11%	21%	8	NISC provides data processing services and billing software for the energy and telecommunications industries. A new $16 million facility in St. Louis offers walking trails, activity rooms and a fully equipped IT training facility that can house 90 students. A comprehensive medical plan is provided to employees and their families at no cost. Employees can contribute to a benevolence fund matched by NISC to help other employees and their families in times of need or tragedy.
46	**Chicago Mercantile Exchange Holdings Inc.** Chicago www.cme.com	1,274	474	17%	6%	4	Founded as the Chicago Butter and Egg Board in 1898, the CME became the first publicly traded U.S. financial exchange in 2002. The IT group processes 1.8 million electronic trades daily at 100 milliseconds each. Monetary reward programs include the Employee Innovation Program, which supplies legal and intellectual property assistance for employees to apply for U.S. patents for their ideas.
47	**Ernst & Young** Lyndhurst, N.J. www.ey.com	23,089	1,076	9%	4%	4	This U.S. division of Ernst & Young International provides accounting, consulting, tax and legal services from its offices throughout the U.S. A flexible work environment is customized for everyone on staff. A variable-pay program, effective for fiscal 2005, provides for fixed annual funding so rewards and recognitions remain consistent.
48	**Cerner Corp.** Kansas City, Mo. www.cerner.com	5,345	2,499	23%	15%	17	Cerner sells clinical, financial and administrative information management applications. IT employees work with leading-edge technology and tools, including computer languages, operating systems and hardware. The company offers an on-site Montessori facility called the CernerKids Learning Center.
49	**Allstate Insurance Co.** Northbrook, Ill. www.allstate.com	37,236	4,266	5%	7%	15	In the Florida hurricanes of 2004, IT employees helped set up and operate on-site mobile claim and customer service centers. A giving campaign in 2005 for victims of the Asian tsunami collected more than $1 million. IT employees are offered part-time schedules, job sharing, job rotations, compressed workweeks and telecommuting.
50	**Juniper Networks Inc.** Sunnyvale, Calif. www.juniper.net	2,152	104	30%	5%	5	Decked out with the latest gadgets, IT staff at this IP router maker carry BlackBerry devices and/or cell phones (with global coverage), have high-speed Internet access from home and use laptops with wireless cards. Juniper management views IT technologies as strategic to meeting business initiatives, and the IT staff works with management to achieve this.
51	**Staples Inc.** Framingham, Mass. www.staples.com	43,000	695	14%	10%	10	This office supply company offers an extensive curriculum of internal training and development opportunities, including project management certification, leadership development, technical skills development and interpersonal communication. National IT conferences and symposiums are held each year, and IT workers are offered tuition reimbursement.
52	**Paychex Inc.** Rochester, N.Y. www.paychex.com	9,813	649	18%	4%	14	This payroll accounting firm processes the payrolls of about 505,000 clients. A company training and development center provides an average of 113 hours of training per employee per year. This past holiday season, IT employees helped 25 families, providing gifts for each family member and a grocery store gift card to help pay for a holiday meal.



WE FIT AN ENTIRE POST OFFICE™ INTO A COMPUTER.

For the second year running, we are one of *Computerworld* magazine's Top 100 Places to Work in IT. Two million people visit usps.com daily. One reason is because of our hi-tech products like Click-N-Ship,® which allows our customers to pay postage online and generate labels. Other applications like Carrier Pickup™ Online Notification make the U.S. Postal Service® a great place to start your IT career.

UNITED STATES POSTAL SERVICE

©2005 United States Postal Service. Eagle symbol and logotype are registered trademarks of the United States Postal Service.

usps.com

The Tops for...

	DIVERSITY	TRAINING	CAREER DEVELOPMENT	BENEFITS	RETENTION
1	Hogan & Hartson LLP	Infosys Technologies Ltd.	Juniper Networks Inc.	NASD	Quicken Loans Inc.
2	Miami-Dade County	University of Miami	NASD	Quicken Loans Inc.	American Fidelity Assurance Co.
3	University of Miami	The Mitre Corp.	American Fidelity Assurance Co.	Hogan & Hartson LLP	American Century Investments
4	Universal Health Services Inc.	Harrah's Entertainment Inc.	American Century Investments	Nemours	National Rural Electric Cooperative Association
5	Royal Caribbean Cruises Ltd.	USAA	Philip Morris USA Inc.	American Century Investments	University of Miami
6	Assurant Solutions	Cerner Corp.	Health Care Service Corp.	Philip Morris USA Inc.	NASD
7	Hilton Hotels Corp.	American Century Investments	Aflac Inc.	Verizon Wireless	J.B. Hunt Transport Services Inc.
8	Southern California Edison Co.	Network Appliance Inc.	Principal Financial Group Inc.	Ford Motor Co.	Network Appliance Inc.
9	Northrop Grumman Corp.	Quicken Loans Inc.	Chicago Mercantile Exchange Holdings Inc.	Booz Allen Hamilton Inc.	Qualcomm Inc.
10	J.C. Penney Co.	Minnesota Life Insurance Co.	Discover Financial Services Inc.	National Rural Electric Cooperative Association	Assurant Solutions

The top 10 lists above show the very best of the best – the companies that excel in five areas of employment: diversity, training, career development, retention and benefits. To determine the top 10 lists, we considered the following factors: **Diversity:** Percentage of women and minorities in staff and managerial positions. **Training:** Average number of training days and average cost of training per IT worker per year. **Career development:** Mentoring programs and tuition reimbursement for college classes and technical certifications. **Retention:** Frequency of employee satisfaction surveys, turnover rate, promotions and corporate communications initiatives. **Benefits:** A range of benefits, including sabbaticals, health and vision benefits (percentage paid for by company) and long-term care.

	COMPANY	TOTAL EMPLOYEES	IT EMPLOYEES	IT EMPLOYEE PROMOTIONS	IT EMPLOYEE TURNOVER	TRAINING DAYS OFFERED PER IT EMPLOYEE	WHAT'S SPECIAL?
53	**Nationwide Mutual Insurance Co.** Columbus, Ohio www.nationwide.com	32,175	4,556	11%	6%	Not available*	This provider offers personal and commercial property and casualty coverage, life insurance and financial services, professional liability, workers' compensation, managed health care and other coverage. Career guides for each of 16 IT jobs identify and define the specific core skills for each IT group, establish the proficiency levels for each skill, provide recommendations for skills enhancement and offer career guidance.
54	**California State Automobile Association** San Francisco www.csaa.com	6,174	247	8%	17%	10	The AAA Member organization for Northern California, Nevada and Utah, CSAA is the third-largest AAA club, serving nearly 4 million members. The company provides three days of paid time annually for volunteerism. In 2004, more than 2,500 CSAA workers took part in volunteer projects. IT training ranges from desktop to technical, and from individually tailored training to traditional classroom and online learning.
55	**Discover Financial Services Inc.** Riverwoods, Ill. www.discovercard.com	14,174	1,299	11%	7%	5	A business segment of Morgan Stanley, this company issues the Discover-brand credit cards, which are used by some 50 million members. The average workweek for IT employees is 40 hours; the company also offers flexible scheduling and summer hours. On the most recent IT employee survey, 95% of IT employees said they have a good relationship with their manager. New hires receive 25 days of paid time off, plus seven company holidays.
56	**Publix Super Markets Inc.** Lakeland, Fla. www.publix.com	127,434	523	16%	12%	13	One of the largest privately owned supermarket operators in the U.S., Publix has 850 stores in Florida, Alabama, Georgia, South Carolina and Tennessee. The top 30 leadership positions in the IT department are held by employees with an average tenure of more than 22 years. More than 120 IT workers have 10 years or more of service. Eligible monthly salaried IT workers can earn a month's salary as a holiday bonus for a complete calendar year.
57	**The Vanguard Group Inc.** Valley Forge, Pa. www.vanguard.com	10,713	2,463	7%	4%	6	Founded in 1975, the No. 2 fund manager in the U.S. offers individual and institutional investors a line of mutual funds and brokerage services, managing $815 billion in assets. A profit-sharing plan allows individuals to earn up to an additional 40% above their annual base salary. Vanguard has never had layoffs in its 29-year history.
58	**West, a Thomson business** Eagan, Minn. www.west.thomson.com	9,682	1,411	12%	5%	12	This provider of online information and research services to the U.S. legal market holds an annual off-site meeting for its 1,000 IT workers. One recent IT project involved the development of a smart research engine. Entry-level employees can participate in a two-year rotation program that gives them exposure to all major areas of the IT unit.
59	**Pennsylvania National Mutual Casualty Insurance Co.** Harrisburg, Pa. www.pennnationalinsurance.com	880	106	11%	3%	7	Founded in 1919, this insurance provider has been a leading Harrisburg employer throughout its history. It now operates in nine Eastern states and offers auto, homeowners, liability and workers' compensation insurance. The 17 IT managers and supervisors average more than 13 years at the company. A five-year IT strategic plan gives IT employees a good understanding of how their current projects are part of a larger long-term plan.
60	**Miami-Dade County** Miami www.miamidade.gov/technology	660	668	4%	4%	6	The department that provides IT services for the Miami-Dade County government and the county's 2 million residents offers an array of services, maintaining everything from the county's main data center to its Web sites. The county receives more than 100,000 résumés per year but hires only 2,000 to 3,000 new employees, or less than 5%.
61	**Schneider National Inc.** Green Bay, Wis. www.schneider.com	21,185	365	2%	9%	5	Founded in 1935, this truckload and intermodal services company operates some 14,000 trucks and more than 40,000 trailers. Workers in the military receive full pay and benefits for up to 18 months while on active duty and are assigned a family sponsor from the company, who stays in touch with the family to assist with questions regarding benefits and other issues.
62	**Caterpillar Inc.** Peoria, Ill. www.cat.com	38,128	2,506	18%	1%	8	The world's leading maker of earthmoving machinery and supplier of agricultural equipment, Caterpillar gives its IT employees the opportunity to work with managing partners and directors at major manufacturing and marketing locations in North America, Europe, China, Japan, Brazil, India and Australia.
63	**Northern Trust Corp.** Chicago www.ntrs.com	8,022	925	15%	6%	5	Flexible work schedules are a hallmark of this financial services company. All IT employees are eligible to work part time without limiting their promotional opportunities. Compressed workweeks such as four 10-hour days are common, and a few IT employees work remotely full time.

*Companywide in 2004, Nationwide spent more than $1.6 million and allocated 800 days for training. The company doesn't keep individual training records.

Your presentation is due now. Your ink is due in two days.

(Isn't it time for a better printer?)

You can't afford not to buy an HP printer.

hp invent

HP Deskjet 6540 Color Inkjet Printer

- Print speed: up to 30 ppm black, 20 ppm color
- Resolution: up to 4800 x 1200 dpi optimized with HP PhotoREt III
- Paper handling: 150-sheet input capacity
- Dual USB ports
- 1-year limited warranty

$129.99 PRINTER CDW 680810

$15 HP AWARD CARD AVAILABLE[1]

HP Officejet 6210 All-in-One

- Print and copy speed: up to 23 ppm black, 18 ppm color
- Print resolution: 4800 x 1200 dpi optimized
- Scan resolution: 19,200 dpi enhanced and 48-bit color
- Direct photo printing with PictBridge
- 1-year limited warranty

$199.99 PRINTER CDW 680780

$20 HP AWARD CARD AVAILABLE[1]

HP Officejet 7210 All-in-One

- Print and copy speed: up to 30 ppm black, 20 ppm color
- Print resolution: 4800 x 1200 dpi optimized
- Scan resolution: 2400 x 4800 dpi optical with 48-bit color
- Direct photo printing with PictBridge and integrated memory card slots
- USB and Ethernet ports
- 1-year limited warranty

$299.99 PRINTER CDW 737818

$30 HP AWARD CARD AVAILABLE[1]

With some printers, you can only order cartridges from the manufacturer. With an HP printer or All-in-One, you can get cartridges from CDW or anywhere that sells them. And that's just one of the ways HP saves you now and for years to come. Get the printer and supplies you need. Get an HP printer from CDW.

CDW

The Right Technology. Right Away.

CDW.com • 800.399.4CDW

In Canada, call 800.387.2173 • CDW.ca

[1]Call your CDW account manager about HP Gift Card mail-in offer; offer valid from 6/20/05–7/20/05. Offer subject to CDW's standard terms and conditions of sale, available at CDW.com. ©2005 CDW Corporation

Top Five Benefits Offered

(HIGHEST PERCENTAGES OF COMPANIES THAT OFFER)

Paid vacation	100%
Health insurance	99%
Flexible hours	98%
Employee assistance programs	96%
Pretax programs for uncovered medical expenses	95%

TOP RETENTION METHODS

Competitive salaries	100%
Competitive benefits	98%
Flexible work hours	97%
Work/life balance	97%
Tuition reimbursement	95%
Bonuses	94%
Telecommuting options	88%
Unpaid sabbaticals	41%

Bottom Five Benefits Offered

(LOWEST PERCENTAGES OF COMPANIES THAT OFFER)

Paternity leave (beyond FMLA)	30%
On-site child care	29%
Backup child care	25%
On-site concierge	23%
Paid sabbaticals	14%

	COMPANY	TOTAL EMPLOYEES	IT EMPLOYEES	IT EMPLOYEE PROMOTIONS	IT EMPLOYEE TURNOVER	TRAINING DAYS OFFERED PER IT EMPLOYEE	WHAT'S SPECIAL?
64	**Temple University** Philadelphia www.temple.edu	5,371	237	11%	6%	5	Temple IT workers deal with issues ranging from peer-to-peer file sharing to integrating wireless applications to support medical records. The Philadelphia-based university, which enrolls more than 34,000 students, offers employees family tuition benefits and the opportunity to use its health club facilities and participate in university programs.
65	**U.S. Postal Service** Washington www.usps.gov	707,485	1,216	9%	6%	1	Each day, the USPS delivers mail to nearly 140 million homes, businesses and post office boxes. IT employees' performance is tracked and rewarded via a suite of Web-enabled performance and compensation systems. Recent IT projects include initiatives that have enabled customers to purchase postage and print shipping labels via the USPS Web site.
66	**EarthLink Inc.** Atlanta www.earthlink.net	2,000	800	5%	9%	3	One of the largest Internet service providers in the country, EarthLink has about 5.2 million consumer and small-business customers. EarthLink absorbs a large portion of employees' health care costs and offers career development programs and cross-functional training.
67	**International Truck and Engine Corp.** Warrenville, Ill. www.internationaldelivers.com	14,776	583	12%	3%	4	This maker of heavy-duty trucks offers a special program for its IT workers, the IT Professional Grade Advancement Program. This program focuses on developing IT employees' competencies in areas required by the business and their technical function, with a balance among technical, business, communication and leadership skills. The program also provides a career development track for nonmanagerial IT professionals.
68	**Quest Diagnostics Inc.** Teterboro, N.J. www.questdiagnostics.com	37,000	1,465	13%	11%	4	In 2004, more than 12% of IT employees at this clinical lab received promotions; one in every four IT workers has a management role. A new job-rotation program at the director level draws cross-functional knowledge and expertise into all areas of the organization. The majority of IT employees are supplied with laptop computers with VPN connectivity.
69	**Comerica Inc** Auburn Hills, Mich. www.comerica.com	11,000	708	16%	4%	10	This bank holding company has three divisions, with offerings that include business and asset-based lending, credit and international trade finance, consumer lending and deposits. IT staff members take part in an annual United Way campaign. The company offers flexible work arrangements, including flexible work schedules and the option of telecommuting.
70	**Carlson Cos.** Minnetonka, Minn. www.carlson.com	20,202	1,045*	1%	9%	2	Last year, Carlson Cos. launched a 12-month IT mentoring program designed to encourage career development and foster learning and personal growth while maintaining an open channel for advice, feedback and counsel. Within its first year, the program matched 50 mentors with colleagues from different teams in the IT organization.
71	**Corning Inc.** Corning, N.Y. www.corning.com	25,000	428	18%	6%	4	The world's top maker of fiber-optic cable, Corning's global work environment allows employees to participate on virtual teams and work with colleagues worldwide. The company provides a scholarship program called the Life After High School Service that helps pay for children's educational expenses in the event of an employee's death or total disability.
72	**Eastman Chemical Co.** Kingsport, Tenn. www.eastman.com	10,700	352	7%	10%	10	Divided into three business segments, this manufacturer produces chemicals, fibers and plastics. IT workers can choose to advance via a technical ladder or a managerial ladder. Cross-functional assignments are designed to enhance employees' personal career development plans. The company offers flexible work schedules to its IT staff.
73	**Southern California Edison Co.** Rosemead, Calif. www.sce.com	14,276	1,085	8%	2%	6	This utility provides power delivery across more than 50,000 square miles. Within that service territory are multiple work locations, so IT workers can occasionally work at sites other than their assigned offices. Southern California Edison's CIO Awards recognize individuals who use technology to bring value to the company.
74	**National City Corp.** Cleveland www.nationalcity.com	33,297	1,419	10%	8%	8	Last year, the IT department at this regional bank developed a competency model to identify the expectations of each role to help employees identify strengths and training options. The company's CIO meets with employees and conducts regular open-forum meetings designed to generate dialogue, address questions and facilitate the sharing of ideas.
75	**Edward D. Jones & Co.** St. Louis www.edwardjones.com	29,223	1,008	10%	6%	4	In 2004, IT workers at this financial services firm assisted in renegotiating vendor contracts that, when fully implemented, will result in annual cost savings of about $10 million. A new self-development process allows IT workers to define career aspirations and self-assess the skills and knowledge necessary to attain them.

*Survey data was gathered in January 2005. This month, Carlson announced an IT outsourcing deal with IBM that is expected to result in 525 job cuts.

Market-driving technology found here.

CME, the largest futures and options on futures exchange in the US, thanks our employees for helping make CME a leading global technology company and one of the 100 best places to work in IT.

Think you're ready to make that kind of impact with an IT group recognized as one of the best places to work? Visit us online at cme.com for more information and opportunities.

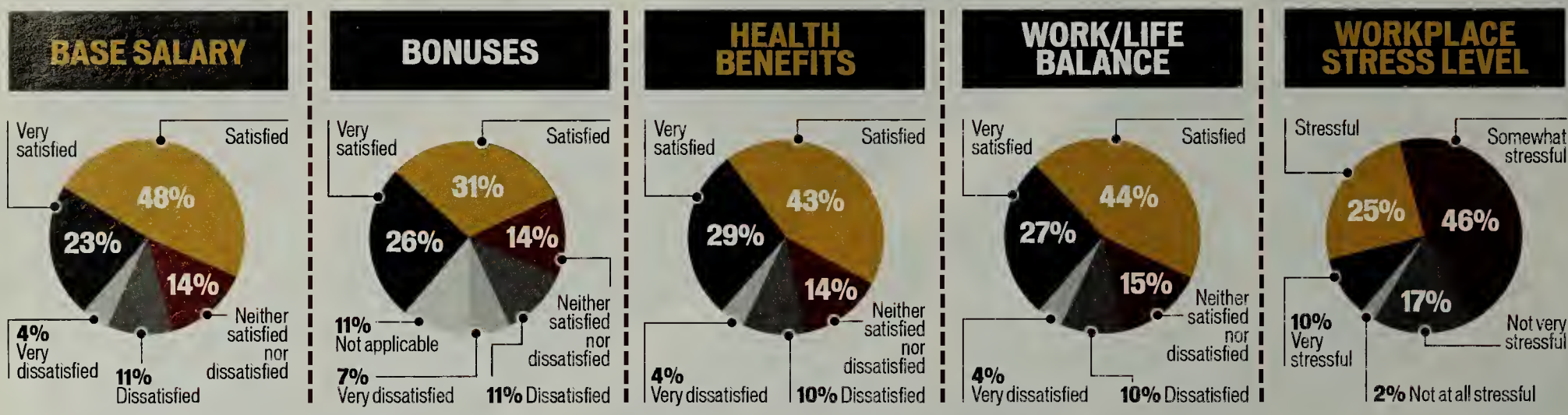
cme
Chicago Mercantile Exchange

cme.com

IDEAS THAT CHANGE THE WORLD™

CME, the globe logo, and Chicago Mercantile Exchange are trademarks of CME.

How satisfied are you with your . . . ?



SOURCE: SURVEYS FROM 20,435 IT EMPLOYEES FROM THE FINAL 100 COMPANIES SELECTED.

	COMPANY	TOTAL EMPLOYEES	IT EMPLOYEES	IT EMPLOYEE PROMOTIONS	IT EMPLOYEE TURNOVER	TRAINING DAYS OFFERED PER IT EMPLOYEE	WHAT'S SPECIAL?
76	**HSBC North America Holdings Inc.** Prospect Heights, Ill. www.us.hsbc.com	44,700	3,360	6%	6%	11	This subsidiary of British bank HSBC Holdings PLC comprises all of HSBC's U.S. and Canadian operations and all the former Household International businesses. Benefits packages for IT workers at this banking giant include health and work/life balance programs. New hires are eligible to contribute to their 401(k) accounts after 30 days of employment and receive company matching after one year of service.
77	**Science Applications International Corp.** San Diego www.saic.com	45,625	676	12%	7%	5	The largest employee-owned research and engineering firm in the U.S., SAIC allows workers to earn stock bonuses or stock-option awards, purchase stock directly or gain it through the company's retirement plans. Buyers and sellers can trade SAIC stock in a quarterly internal market. A workforce empowerment group works to identify educational opportunities and incentive programs to increase employee motivation and productivity.
78	**National Rural Electric Cooperative Association** Arlington, Va. www.nreca.coop	685	107	14%	15%	5	The NRECA represents consumer-owned power cooperatives. Turnover in the IT department is relatively low. IT workers are given cutting-edge technology and training, as well as challenging work assignments. Employees of the IT department participate in a program through which many have taken trips to member electric cooperatives to meet customers.
79	**Acxiom Corp.** Little Rock, Ark. www.acxiom.com	4,465	1,880	5%	5%	5	This technology provider helps clients store, integrate and analyze customer data. The TresNet community was formed to increase knowledge by sharing new technologies, current project activities and third-party product information with IT workers spread throughout the organization.
80	**Honeywell International Inc.** Morristown, N.J. www.honeywell.com	56,268	1,594	15%	4%	5	This aerospace company traces its roots back to 1885. Today, the company's largest business segment, Honeywell Aerospace, makes products such as turbofan and turboprop engines, and flight safety and landing systems. IT staffers are trained and certified in Green Belt and Design for Six Sigma, and they have the opportunity to be Black Belt-certified.
81	**DTE Energy Co.** Detroit www.dteenergy.com	12,000	601	4%	3%	10	To minimize impact on its employees, this energy provider scales up or down with supplemental contract staff to respond to short- and medium-term business changes. IT management offers technical training, encourages personal and interpersonal growth and development, and strives to ensure a work/life balance.
82	**DaimlerChrysler AG** Auburn Hills, Mich. www.daimlerchrysler.com	126,642	1,601	3%	2%	5	This automaker produces about 4.6 million vehicles a year, including the Dodge, Jeep, Mercedes and Chrysler brands. The IT organization was the first unit within the company to offer summer hours – with management approval, employees can vary their work hours to have an extra day off every other week or a half day off each week.
83	**Hewitt Associates LLC** Lincolnshire, Ill. www.hewitt.com	12,291	1,536	12%	10%	6	This global outsourcing and consulting firm offers a flexible benefits plan that has a credit and price-tag structure designed to offer competitive medical, dental and vision coverage at no cost to employees. A new performance management system helps solicit IT workers' developmental interests and career aspirations and formalize them in a career plan.
84	**Aquila Inc.** Kansas City, Mo. www.aquila.com	3,203	122	13%	8%	10	This energy provider serves more than 910,000 natural gas customers and more than 452,000 electricity customers. A recent project to migrate all major systems from a mainframe required retraining nearly every IT employee. About 80% of IT employees were trained on Unix, Oracle, system management and development tools.
85	**NASD** Rockville, Md. www.nasd.com	2,330	124	20%	4%	10	Since the Nasdaq stock market was spun off in 2002, NASD has been overseeing over-the-counter securities trading and disciplining traders. The company's Examiner University improves education and use of technology in examining member firms. NASD offers industry technology conferences taught by its own technology professionals.
86	**Northrop Grumman Corp.** Los Angeles www.northropgrumman.com	125,000	2,860	7%	6%	3	This company sells high-tech systems and services to government and commercial customers. Employees can plan their own work hours within a two-week, 80-hour schedule that can include nonstandard hours. The IT department works on a variety of projects, including support of space satellites and homeland security programs. Voluntary turnover is at 4.2%.
87	**CNA Financial Corp.** Chicago www.cna.com	7,350	1,180	4%	14%	6	This insurance company includes Continental Casualty and Continental Assurance. Its primary products are workers' compensation, general and professional liability insurance. CNA has earmarked more than $200 million for new software development this year, part of $1.5 billion that has been committed to technology over the next three years.

The list of the Best Places to Work in IT continues on page 60

poweredbycisco.

road warriors

Fog. Closed exits. Alternate routes.
Now, drivers can receive these and other road conditions
via web, phone or electronic road sign.
Thanks to optical networks, where voice, video and data travel together.
Further proof that all roads lead to a converged network.
Learn how Cisco is keeping people, cargo and business moving at
cisco.com/poweredby.

©2002 Cisco Systems, Inc. All rights reserved.

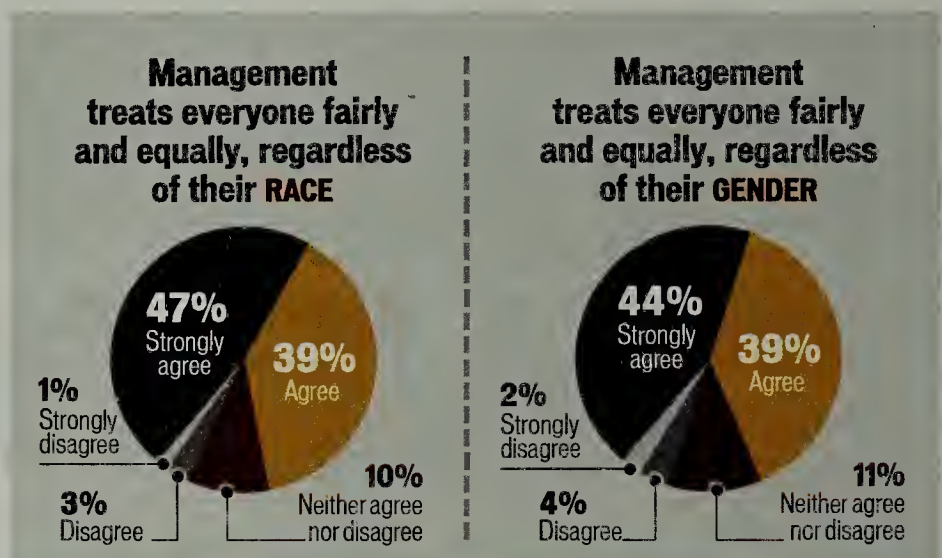
Cisco Systems

innovation. powered by

Most-Desired Benefits

Our survey asked IT workers to rank the importance of various benefits on a SCALE FROM 1 TO 10, WITH 1 BEING "NOT AT ALL IMPORTANT" AND 10 BEING "EXTREMELY IMPORTANT." Here's a look at the benefits that IT workers prize the most (and the least):

PERCENTAGE WHO GAVE THE BENEFIT A "10"			
Paid vacation	76%	Paternity/maternity leave	26%
Health insurance	69%	Overtime pay/comp time for overtime hours worked	25%
Profit sharing/employee stock ownership program/ 401(k)/403(b) plan	49%	Domestic partner/spousal equivalent/same-sex partner benefits	18%
Flexible hours	41%	Employee assistance programs	17%
Telecommuting	35%	Paid or unpaid sabbaticals	15%
Bonuses	34%	On-site fitness center or fitness membership reimbursement	15%
Reimbursement for technology certifications	33%	On-site child care	10%
Continuing education/ executive programs	31%	Job sharing	9%
College tuition reimbursement	27%	Elder care and/or services	6%



SOURCE: RESPONSES FROM 20,435 IT EMPLOYEES AT THE 2005 BEST PLACES COMPANIES

73% ARE VERY SATISFIED OR SATISFIED WITH THEIR COMPANY'S TRAINING AND DEVELOPMENT PROGRAMS

WHERE DO YOU WANT TO WORK? Use our sortable chart to identify the top companies for diversity, training, benefits and other factors. Plus, sort by region. Quicklink a6210

COMPANY-SPONSORED ACTIVITIES

100%	Meetings to present company's business overview, mission and philosophy
100%	Company gatherings (e.g., company picnics, holiday parties)
99%	Open forums with company management
97%	Support for community service
96%	Personal/wellness development opportunities (e.g., financial, stress or time management)
91%	Company/team building
87%	Staff retreats
86%	Company sports teams

Layoffs

Among respondents who indicated that their company's IT department had layoffs in 2004, the following grades were given for how management handled those layoffs:

GRADE	PERCENTAGE
A	12%
B	22%
C	23%
D	12%
F	8%
NO OPINION	23%

78%

RATE EMPLOYEE MORALE AT THEIR COMPANIES AS EXCELLENT, VERY GOOD OR GOOD

68%

STRONGLY AGREE OR AGREE THAT THEIR JOBS ARE SECURE

82%

STRONGLY AGREE OR AGREE THAT THEY ARE MOTIVATED TO DO THEIR BEST

	COMPANY	TOTAL EMPLOYEES	IT EMPLOYEES	IT EMPLOYEE PROMOTIONS	IT EMPLOYEE TURNOVER	TRAINING DAYS OFFERED PER IT EMPLOYEE	WHAT'S SPECIAL?
88	**J.C. Penney Co.** Plano, Texas www.jcpenney.com	149,902	1,170	7%	8%	14	IT employees average 14 years with this retailer, which was established in Kemmerer, Wyo., in 1902. IT workers have access to more than 300 course titles on management development and technical topics. IT workers who earn a master's degree are given an additional $3,000 in base salary. Other benefits include flextime, telecommuting and a pension plan.
89	**State Street Corp.** Boston www.statestreet.com	12,335	2,579	15%	8%	4	This Boston-based financial services firm presents the CIO Award to exceptional IT employees semiannually. Recipients are honored by the CIO and featured on the corporate technology intranet site, and they receive a significant monetary award. An in-depth management resource review helps to identify and develop key performers.
90	**Infosys Technologies Ltd.** Fremont, Calif. www.infosys.com	4,938	4,686	10%	7%	21	One of India's top technology consulting firms, Infosys has U.S. headquarters in Fremont, Calif., and operations in more than 15 countries. The company benchmarks its compensation practices against best-in-class companies and pays competitive salaries. Continuous-learning programs focus on technical processes, management and leadership training.
91	**GMAC Insurance Holdings Inc.** Winston-Salem, N.C. www.gmac123.com	2,712	387	9%	9%	10	The automobile financing unit of carmaker General Motors sells insurance to about 1 million policyholders through independent agencies across the U.S. The company offers employees discounts and incentives through the GM Family First program, including discounts on mortgages, new automobiles, insurance and personal mobile phone service.
92	**Burlington Coat Factory Warehouse Corp.** Burlington, N.J. www.coat.com	28,000	241	5%	9%	4	Burlington Coat Factory Warehouse operates 330 retail stores that sell clothing, bath items, children's apparel and furniture, gifts, jewelry, linens and shoes. Located in more than 40 states, the company's stores include Burlington Coat Factory, Baby Depot, Cohoes Fashions, Luxury Linens, MJM Designer Shoes and Totally 4 Kids. IT employees regularly work with new, cutting-edge technologies. Five percent of its IT staffers were promoted in 2004.
93	**Xerox Corp.** Stamford, Conn. www.xerox.com	32,048	635	9%	4%	5	Best known for its color and black-and-white copiers, Xerox also makes printers, scanners and fax machines and sells document management software and copier supplies. Schedules for IT employees are created to help them balance work, family and professional development needs, including telecommuting and remote work options.
94	**Hogan & Hartson LLP** Washington www.hhlaw.com	1,935	105	6%	7%	5	In 2004, the IT department at this multinational law firm received innovative technology awards from *Law Technology News* and the Metastorm BPM Conference. The firm's multidisciplinary teams travel to London, Paris, Prague, Beijing, Berlin, Los Angeles and Miami. IT personnel at all levels are given the opportunity for such travel.
95	**Progress Software Corp.** Bedford, Mass. www.progress.com	800	102	8%	2%	5	Perks at the Bedford, Mass., headquarters of this software maker include walking trails, a patio and an on-site gym. Regular social events allow employees to interact outside work. Pet owners can bring in their pets for the day to get them to a vet's appointment. The company promotes from within: The vice president of IT started with the company as an IT manager.
96	**Aetna Inc.** Hartford, Conn. www.aetna.com	26,829	3,013	3%	7%	6	This insurer offers work-hour flexibility to all its workers and especially its IT employees, who are equipped with the latest technology and network connections. IT professionals work with leading-edge technology, allowing for diversified training and career progression. IT professionals can receive 100% reimbursement on college tuition up to a $3,000 annual cap.
97	**Nielsen Media Research Inc.** New York www.nielsenmedia.com	6,705	611	16%	6%	2	A subsidiary of business information giant VNU, Nielsen Media is best known for its audience measurement services. IT workers are offered work/life balance options and have opportunities to work on well-funded projects. At the upper levels, IT professionals work directly with top management to shape and execute the strategy of the business.
98	**Nemours** Jacksonville, Fla. www.nemours.org	3,800	124	6%	6%	5	This chemical company provides 100% health care coverage for the children of full-time workers. Recent IT projects include a data warehouse rollout that involved the use of cutting-edge database hardware and analysis technologies. IT workers are offered remote access and wireless technologies so they can telecommute.
99	**Scientific-Atlanta Inc.** Lawrenceville, Ga. www.scientificatlanta.com	1,683	102	5%	1%	10	IT workers at this maker of set-top cable boxes average more than 12 years of experience in technology deployment and support. To ensure that IT is working on projects considered the most beneficial to the business, the company set up an IT governance process to approve or reject IT projects above a certain investment threshold, which includes the cost of staff.
100	**Regions Financial Corp.** Montgomery, Ala. www.regions.com	26,225	1,019	12%	4%	5	This financial services firm's merger with Union Planters in 2004 created an entity with more than 1,300 branches in 15 states. An accelerated development program offers IT workers time in each area of the division, allowing them to acquire hands-on training to understand how each job affects other areas in the division. IT staffers can work flexible hours; they can choose different shifts or modify their schedules so they can arrive late or leave early. They can also work from home.

Best Places to Work Advertising

Please see the IT Careers section starting on PAGE 69 for the following Best Places to Work sponsors.

- American Family Insurance Group
www.amfam.com
- Ernst & Young
www.ey.com
- J.B. Hunt
www.jbhunt.com
- MasterCard International Inc.
www.mastercardintl.com
- Miami-Dade County
www.miamidade.gov
- National City Corp.
www.nationalcity.com
- Quicken Loans Inc.
www.quickenloanscareers.com
- Social Security Administration
www.socialsecurity.gov
- Southern California Edison
www.sce.com
- Thomson West
www.west.thomson.com
- University of Pennsylvania
www.upenn.edu/computing
- Wal-Mart Stores Inc.
www.walmartstores.com

Some of our most talented people don't wear scrubs.

Thanks to our extraordinary IT team, our health system is one of the best places for kids.

The power to improve a child's life. That's what gets our IT professionals up in the morning—and sometimes keeps them up at night. It takes extraordinary dedication and talent to help Nemours lead the nation in the use of informatics to transform the safety, quality and efficacy of health care for kids. From completing the largest EMR implementation in a pediatric setting, to successfully integrating our geographically dispersed business and clinical systems, our IT team's accomplishments are beyond mission-critical – they're life-critical. To learn more, or to join our award-winning IT team, visit **www.Nemours.org**.

Nemours

CHRIS HARTLOVE

Hogan & Hartson LLP staffers: Ruth Diaz (front), applications analyst; Birgitte Kaye, assistant IT director; Khizr Khan, litigation technology manager.

IT for Hire

How this year's top companies are beefing up the IT ranks and finding the right talent after years of slow growth.

By Steve Ulfelder

WHAT WAS a Washington-based applications analyst like Ruth Diaz doing in Beijing this past March?

Training end users, for one thing. But Diaz, who works at Hogan & Hartson LLP (No. 94), a Washington-based law firm with 21 offices worldwide, says there was a lot more to it than that.

"I was really able to connect with the other [IT] people there," she says. "Since I came back to headquarters, there's been a tighter link there. They know what we're doing, and we know what they're doing."

Last year, after a period of cuts, outsourcing and general hibernation, 49% of the IT organizations at our Best Places to Work began to add staff, bulking up by an average of 8%. That trend has accelerated this year, with 61% saying they will boost their workforces by an average of 9%.

We wondered how these leading IT groups are addressing the challenges brought on by this encouraging, if modest, buildup. There's still a big pile of résumés to choose from — how do you make sure you're getting the best? How do you plan for controlled staffing growth to prevent layoffs the next time the economy falters?

The Grapevine

Best Places use a variety of strategies to hire the best possible candidates. Many rely heavily on employee referrals. That's the case at Mount Laurel, N.J.-based Automotive Resources International (No. 11).

"Just looking at the résumés we get is the least successful [method]," says Tony Candeloro, the company's manager of systems and programming. "We prefer to use referrals from people on staff — they know what the job requirements are, so there's a

Continued on page 64

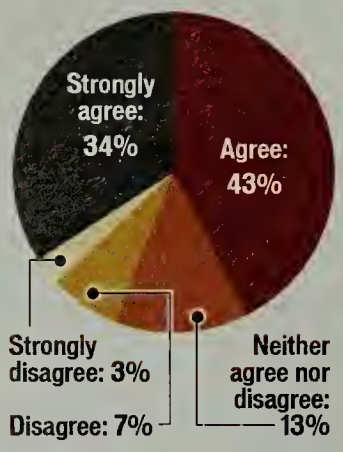
100 BEST PLACES TO WORK IN IT 2005

BEST PLACES, BEST PRACTICES

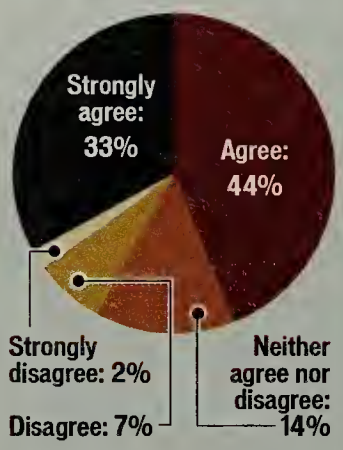
CURRENT OPENINGS:
Intelligence Analysts
IT Professionals
Data Base Administrators
Homeland Security Analysts
Information Security
Network Engineers
Program Managers
Software Developers
Systems Engineers
Linguists
CONNECT WITH SUCCESS
For 36 years, the employee owners of SAIC have made the company successful, and they have shared in the rewards of that success. Today, our road to success wraps around the globe and reaches into space as we work to find solutions to complex technical problems in national and homeland security, energy, the environment, space, telecommunications, health care, and logistics. If you want to be part of a continuing success story, contact SAIC. Connect with success.
Science Applications International Corporation (SAIC), a Fortune 500® company, is the largest employee-owned research and engineering company in the nation. To learn more about becoming an employee owner at SAIC, visit us at www.saic.com/career. We are an Affirmative Action Employer that values cultural diversity in the workplace. EOE, M/F/D/V
SAIC®
From Science to Solutions™
SAIC.COM CAREER

EMPLOYEE PULSE

"This is a team-oriented company/department."



"I have access to training and education to enhance my skills."



SOURCE: SURVEYS FROM 20,435 IT EMPLOYEES FROM THE FINAL 100 BEST PLACES COMPANIES SELECTED

Continued from page 62

sort of prescreening built in."

While the Automotive Resources referral program is informal, many top employers have structured programs that may include tempting bonuses. Booz Allen Hamilton Inc., a McLean, Va.-based consulting firm that ranks No. 36 on the Best Places list, has a referral program that's extensive enough to require a full-time manager, according to Sheryl Jones, manager of Booz Allen's support services. "HR will broadcast an e-mail saying, 'We're looking to fill such-and-such positions,' " Jones says. Bonuses for referrals that lead to permanent hires range up to $3,000.

One intriguing feature of Booz Allen's referral program, perhaps borrowed from retailers that know it's easier to recapture a former customer than it is to start from scratch, is dubbed Comeback Kids.

The feature "segregates all people who already have [Booz Allen] experience," Jones says. "It's extremely successful because it allows us to understand what we're buying. We can look at [a former employee's] history with the company and assessments." She adds that the history is invaluable because "anyone can 'pass' an interview if they're prepared."

Sweat Box

Perhaps, but Steve Machlis knows how to make that interview a bit tougher -- and he likes it that way. Machlis is vice president of IT at NASD, the private-sector regulatory firm that landed at No. 85 on this year's list. Being a watchdog in the rapid-fire financial sector means pressure is a constant, and Rockville, Md.-based NASD tries to simulate that pressure through group interviews. "We like to get [job candidates] in two- or three-on-one interviews to see how they react under pressure," he says.

But there's more to the technique than playing good cop/bad cop. "All [NASD] participants in the interview bring different experiences and perspectives," Machlis says, and thus they come away with a 360-degree view of the applicant. As a result, it's not unusual at NASD for a candidate to interview for one job but end up in another.

When it comes to finding people who can handle pressure, Cerner Corp., a Kansas City, Mo.-based health care company (No. 48), has a powerful idea: "I've had a great deal of success recruiting ex-military people [with experience] supporting active battle groups," says Don McCarter, technical engagement leader at the Cerner Great Lakes unit. "For withstanding pressure and team leadership, military experience is super."

The range of creative hiring ideas goes a long way toward explaining how our Best Places to Work got that way. **54430**

Ulfelder is a freelance writer in Southboro, Mass. Contact him at steve@ulfelder.com.

Above the White Noise

IT departments face a flood of communication from the entire company. How can you keep your IT staff and business units focused on what's really important? These Best Places companies tell you how.

By Stacy Collett

CHARADES, video cameras, blunt e-mails to the CIO — is this any way to run an IT department?

When it comes to communicating with IT and other business units, the answer is yes, according to several Best Places companies. Faced with growing staff size, more projects or even bad news to share, IT leaders have stepped up their communications efforts.

While brown-bag lunches, off-site team-building exercises and departmental newsletters haven't gone away, these companies have come up with unique ways to keep the information pipeline flowing in both directions.

Communicating With IT Staff

Sometimes, the drone of a technical presentation can defeat the purpose of an informational meeting. At insurance company Aflac Inc. (No. 26) in Columbus, Ga., organizers of quarterly leadership meetings like to throw in games and activities to spice things up.

At one meeting, each IT group recorded amusing mock commercials to explain what they do to support the company. The commercials were then judged by other teams. Teams also play "Win, Lose or Draw," a game of sketch-pad charades. In Aflac's case, team members draw pictures to help the other IT staffers guess what projects they're working on.

"We make it more interactive," explains Gerald Shields, deputy CIO. "It sticks with them better."

Other employees prefer a lower profile when communicating. At Paychex Inc. (No. 52) in Rochester, N.Y., Vice President of IT Dan Canzano set up a Web site where 10,000 employees can e-mail him questions. "Canzano's Corner" receives a handful of sometimes blunt inquiries each month on topics such as vacation policies, new technology, tuition reimbursement and organization changes.

"Sometimes questions to executive

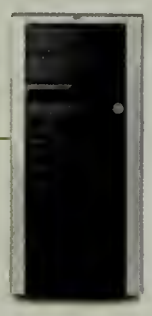
Continued on page 66

"It's very easy to think the help desk should do X-Y-Z, until you sit in the middle of a help desk and the phones ring off the hook and you have to figure out how to prioritize."

JOEL JACOBS, DEPUTY CIO, THE MITRE CORP.

Runs your business. Runs rings around the competition.

Intel® Xeon™ Processor power, more expandability and more manageability. For less money. The HP ProLiant ML150 G2 gives you the power and reliability you need now with room to grow as your business grows. It has dual Xeon™ Processor capability and hot-pluggable SATA or SCSI drives that can be replaced without powering down. There's even room for up to eight gigabytes of ECC memory for added reliability and six I/O cards for maximum flexibility. Try to get that level of expandability from our competitors at this price. And only HP offers a remote management option with its Lights-Out 100 Card. Add a DAT 72 tape drive, and your compliance and backup issues are addressed—more securely and affordably. These are just two HP Smart Office Solutions that give you more expertise, technology, more service and more support. To get more without paying more, run over to HP.



Save up to $203[1]

HP ProLiant ML150 SERVER

$925

- Intel® Xeon™ Processor (3GHz Dual-Processor Capable)[2]
- 512MB PC2700 DDR ECC SDRAM
- Broadcom 5721 PCI-Express Gigabit NIC (embedded)
- 4 Port SATA Adapter in a PCI slot (optional SATA RAID Controller available)
- 80GB SATA Hard Disc Drive (Hot-Plug Capable)[5]
- 48X IDE CD ROM Drive, floppy drive[4]
- 5U Tower Chassis
- Hardware limited warranty, 1-year parts, 1-year labor, 1-year on-site support[3]

Add secure backup.

HP StorageWorks DAT 72 TAPE DRIVE

- 72GB (using 2:1 compression) on a single cartridge
- 21.6GB/hr. maximum transfer rate (compressed)
- Reads and writes DAT 72, DDS-4 and DDS-3 media
- Includes One-Button Disaster Recovery for quick service restores

$799

$100 instant savings
($899 - $100 instant savings = $799)[6]

MORE ADVICE | MORE TECHNOLOGY | MORE SUPPORT

Save even more with HP Smart Buys.
See our site below for more choices and more savings.

CALL	**1-866-625-3578**
CLICK	**www.hp.com/go/ML150mag4**
VISIT	**your local HP reseller**

hp invent

Prices shown are HP Direct prices; reseller and retail prices may vary. Prices shown are subject to change and do not include applicable state and local taxes or shipping to recipient's address. Offers cannot be combined with any other offer or discount, are good while supplies last and are available from HP Direct and participating HP resellers. All featured offers available in U.S. only. 1. Savings based on HP published list price of configure-to-order equivalent. 2. Intel's numbering is not a measurement of higher performance. 3. Certain warranty restrictions and exclusions may apply. For complete warranty details, call 1-800-345-1518 (U.S.). 4. 48X Max CD-ROM Drive data transfer rates vary from 6,750 Kbps to 7,800 Kbps. 5. For hard drives, GB=billion bytes. 6. $100 instant savings offer valid on qualifying HP StorageWorks DAT 72 tape drives only through 6/30/05. Intel, Intel Inside, the Intel Inside Logo and Intel Xeon are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries. ©2005 Hewlett-Packard Development Company, L.P.

Continued from page 64

management can be intimidating [to ask]," Canzano says. "This allows them to be somewhat private and direct with their questions."

Rather than respond with an e-mail, Canzano will sometimes call questioners directly — much to the surprise of a few mortified employees. "The more I've done it over the last several years, the better it has gotten. Word gets around. 'Hey, send him a note, and he'll call you.' "

Most IT departments tone down the fun and games when communicating with other parts of the company. But they don't mind letting other business units walk a mile in their shoes.

When David Lehman took over as vice president of IT at The Mitre Corp. (No. 10), the IT department was viewed merely as a group of support staffers who regularly received hate mail from end users. So Lehman and Deputy CIO Joel Jacobs set up a CIO's Customer Council, made up of senior managers from each business unit. The council then put them in the middle of IT operations.

"It's very easy to think the help desk should do X-Y-Z, until you sit in the middle of a help desk and the phones ring off the hook and you have to figure out how to prioritize," says Jacobs. "They didn't appreciate the complexity and sophistication of the operation we're running." Today, the council meets monthly to help set priorities on IT spending.

Don't Go It Alone

When Vision Service Plan (No. 31) in Rancho Cordova, Calif., launched a massive architecture-restructuring initiative that would affect every business unit and employee, Vice President of IT Steve Scott says he knew communication would be vital, so he partnered with VSP's marketing and communications departments.

"We all understood . . . we would be changing a lot of people's lives and how they do their work," Scott explains. "But once you get into a complex project like this, keeping that communications plan uppermost in your mind . . . is difficult to do."

In these cases, IT managers need a dose of their own medicine, he adds. "Just as IT departments don't like business units to deploy technology on their own, you need to partner with the people who really have the [communications] expertise."

A few IT departments hire their own full-time communications professionals. Stephani Osborne was hired by Grant Thornton LLP (No. 18) in 2001 as its first manager of IT communications. She says she serves as "interpreter and translator" to the business units and is the link between IT departments.

"I'm actually the only [IT communications manager] I've run into," Osborne jokes, although Gartner Inc. assures her there are others. **54427**

Collett is a Computerworld *contributing writer. Contact her at stcollett@aol.com.*

RAISING VOICES

Talking to the CIO or anyone in senior management can be intimidating. IT executives at Aflac Inc. have come up with ways to break the ice.

When Deputy CIO Gerald Shields invites a handful of employees to his biweekly "Lunch with the CIO" event, he's the one asking the questions. "I ask them, 'If you had my job, what's the first thing you would work on?' " says Shields. Or he asks them to finish a sentence, such as "I often wonder why Gerald does not fix *blank*."

Or Shields asks if they've heard a particular rumor going around the office and then lays out the truth. "It's good because some people don't feel comfortable asking questions, and this opens up the dialogue," he says.

When Aflac's vice president of application services, Anne German, meets with her staff at lunchtime gatherings, she asks for questions. If the group falls silent, she pulls out a hat filled with questions of her own and has someone read one.

"The question may be, 'I think that the process for elevating code takes too much time. Is there any chance we'll streamline that process?' " Shields says. The reader can either take that question or ask one of his own. "The main thing is to keep that dialogue flowing," he says.

– *Stacy Collett*

DAVID STRICK

Better coffee keeps creative juices flowing for SAIC staffers, from left: Susie Thorpe, project manager; Cora Carmody, CIO; and Eric Williams, manager of IT mergers and acquisitions.

Beyond the Suggestion Box

How managers at the Best Places companies encourage the free flow of ideas, suggestions and innovations.

By Steve Ulfelder

THERE MAY BE more important fresh ideas than fresh coffee — but there are probably none that groggy IT workers look forward to more eagerly.

Science Applications International Corp. (SAIC), a San Diego-based systems integrator and No. 77 on this year's Best Places list, depends on several quasi-formal committees to keep innovative ideas percolating. One such committee is dubbed WIG, for Workplace Improvement Group. It's chaired by Eric Williams, whose primary job is managing SAIC's IT-related merger-and-acquisition group. Williams says it was through WIG that managers realized the importance of high-quality java. "It may seem like a little thing, but it's really important for morale," he says. The budget was finessed; the ancient machines were jettisoned for Starbucks-worthy replacements.

Keeping teams productive and creative is a perennial challenge for IT organizations. And the past nose-to-the-grindstone mind-set in an era of

EMBRACING RISKY BUSINESS

American Family Insurance Group created a sort of internal venture fund with the goal of encouraging IT workers to explore solutions that are risky but have a significant potential payoff.

Like many IT organizations, the insurer works on a chargeback system, billing internal customers for projects. Enterprises have long found that while the chargeback system is generally effective, it can deaden innovation because IT workers feel pressured to grind away at routine billable projects.

American Family's response is intriguing. "Let's say we believe our internal client needs a technology that's risky," says developer Jeff Dekelver. The company has built into its central IT budget time and money for IT workers, regardless of title, to "investigate [the idea], create a proof-of-concept, test and come up with recommendations," he says.

The program is hardly a pie-in-the-sky sabbatical: Employees who make a proposal must sell it to both senior IT managers and the relevant business line. Many ideas are discarded, but some pay off in spades, such as an electronic application system that replaces paper forms for American Family agents. This system, once explored and adopted, "had a heavy positive impact," says Pete Frey, application technology manager. And it has subsequently been "purchased" from IT by several American Family divisions.

– Steve Ulfelder

cost-cutting has exacerbated the problem. In a time when operational efficiency is king, how do you expose employees to hot technologies? We checked in to see how managers encourage the free flow of suggestions and innovations.

Virtually all Best Places companies feature formal mechanisms to ensure that employees are heard.

To be sure, meetings like town halls, brown-bag lunches and their brethren are a familiar even clichéd part of corporate life in companies good and bad. What sets our Best Places apart is that their IT workers truly embrace the meetings and aren't afraid to discuss controversial or unusual ideas with senior managers. At SAIC, CIO Cora Carmody breaks the ice at each monthly town hall by yelling, "What's our No. 1 goal?" to which the entire staff replies, "SOX!" referring to the Sarbanes-Oxley Act.

Crucible of Thinking

Top-down meetings certainly have their place, but many leading employers believe the peer group is the crucible of innovative thinking. Minneapolis-based General Mills Inc., No. 28 on this year's Best Places list, facilitates meetings for technical specialty groups in which volunteers create and present papers to their immediate colleagues.

IT director Mike Meinz offers this example: "There'll be a monthly session where, say, an Oracle [database administrator] presents a paper [to other administrators] on something interesting he's done recently."

General Mills IT staffers also form tech-focused reading groups in which a book on a topic such as Microsoft Corp.'s Visual Studio .Net is read and discussed. Often, Meinz says, these groups result in certification tests for all participants.

American Family Insurance Group, which landed at No. 30 on this year's list, uses several tools to build innovation into its culture (see story, at left). Concerned that good ideas often get bogged down in coding detail, the Madison, Wis.-based insurer encourages developers to create lightning-quick "UI prototypes" that are really little more than a series of screens picturing the user interface of a not-yet-developed application.

"This is just a view from the top, not completely functional by any means," says American Family developer Jeff Dekelver. "The idea is to show users what an app could do, what it could look like" — without a heavy (and unfunded) investment of development time. If the idea meets initial approval, he adds, "we'll write code around it and see if we can get it to work." **54431**

Ulfelder is a freelance writer in Southboro, Mass. Contact him at steve@ulfelder.com.

Careers
Create The Future Now.

We're making health care better through technology, people and innovation.

At PacifiCare, one of the nation's leading consumer health organizations, we're not just anticipating the future, we're creating it. We believe that IT plays a vital role in the healthcare industry and are committed to maintaining an energetic, cutting-edge technical environment that allows you to formulate new ideas at the speed of inspiration.

We have exciting opportunities in:

- **eSystems:** BEA WebLogic, J2EE, XML, UML, EAI, IBM WebSphere
- **Technology Architecture:** Oracle and SQL DBA, DataStage, Vitria, Vignette
- **Administrative Systems:** PeopleSoft HR, Oracle Financials
- **IS Security:** Security Architect, Security Analyst, IT Auditors, Sarbanes Oxley, HIPAA, GLB
- **Data Center:** Unix, Linux
- **Mail Services:** DEC VAX, Cobol, Oracle 9i, FileNet P8 Systems Administration, MS Active Directory Network Engineers

At PacifiCare, we are a company that succeeds because our people make the difference. We offer competitive compensation and a comprehensive benefits program with built-in flexibility. Apply online at **www.pacificare.com** to discover the challenge and fulfillment of joining a company that's shaping the future of health care. If you don't find an exact match today, please apply for a position that most closely fits your qualifications so we can consider you for the right opportunity when it becomes available.

PacifiCare®

Caring is good. Doing something is better.℠

PacifiCare is an Equal Opportunity/Affirmative Action Employer and supports Workplace Diversity.

Just say no to inferior service

Insist on a CompTIA Authorized Service Center (ASC)

Have the right people at the right time for the right solutions.
Know CompTIA certified technicians are right there.

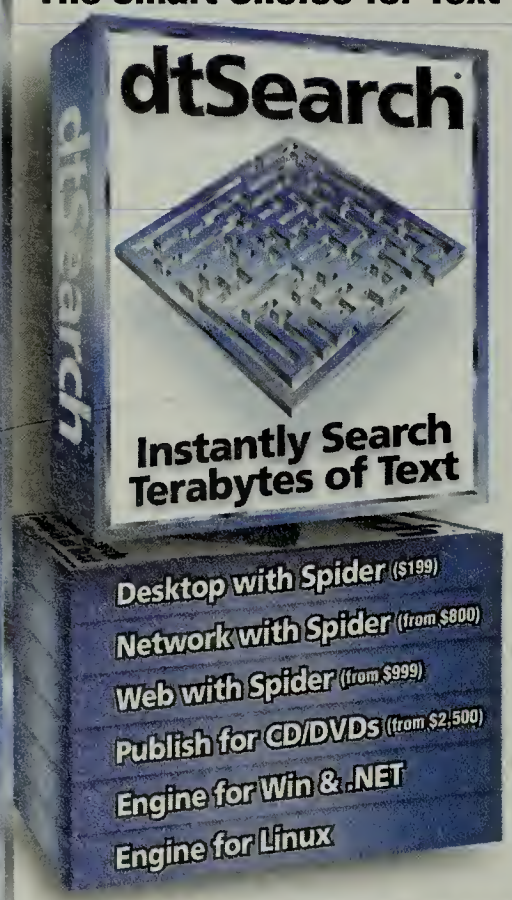
To find an ASC or ASC Gold near you,
or to become one yourself, visit asc.comptia.org/cw

CompTIA®
A+ Authorized Service Center

The Computing Technology Industry Association, a not-for-profit trade association representing the IT industry in 102 countries.

NEW Version 7 Terabyte Indexer

The Smart Choice for Text Retrieval® since 1991



- over two dozen indexed, unindexed, fielded and full-text search options
- highlights hits in HTML, XML and PDF while displaying embedded links, formatting and images
- converts other file types (word processor, database, spreadsheet, email, ZIP, Unicode, etc.) to HTML for display with highlighted hits

Reviews of dtSearch

- "The most powerful document search tool on the market" — *Wired Magazine*
- "dtSearch ... leads the market" — *Network Computing*
- "Blindingly fast" — *Computer Forensics: Incident Response Essentials*
- "A powerful arsenal of search tools" — *The New York Times*
- "Super fast, super-reliable" — *The Wall Street Journal*
- "Covers all data sources ... powerful Web-based engines" — *eWEEK*
- "Searches at blazing speeds" — *Computer Reseller News Test Center*

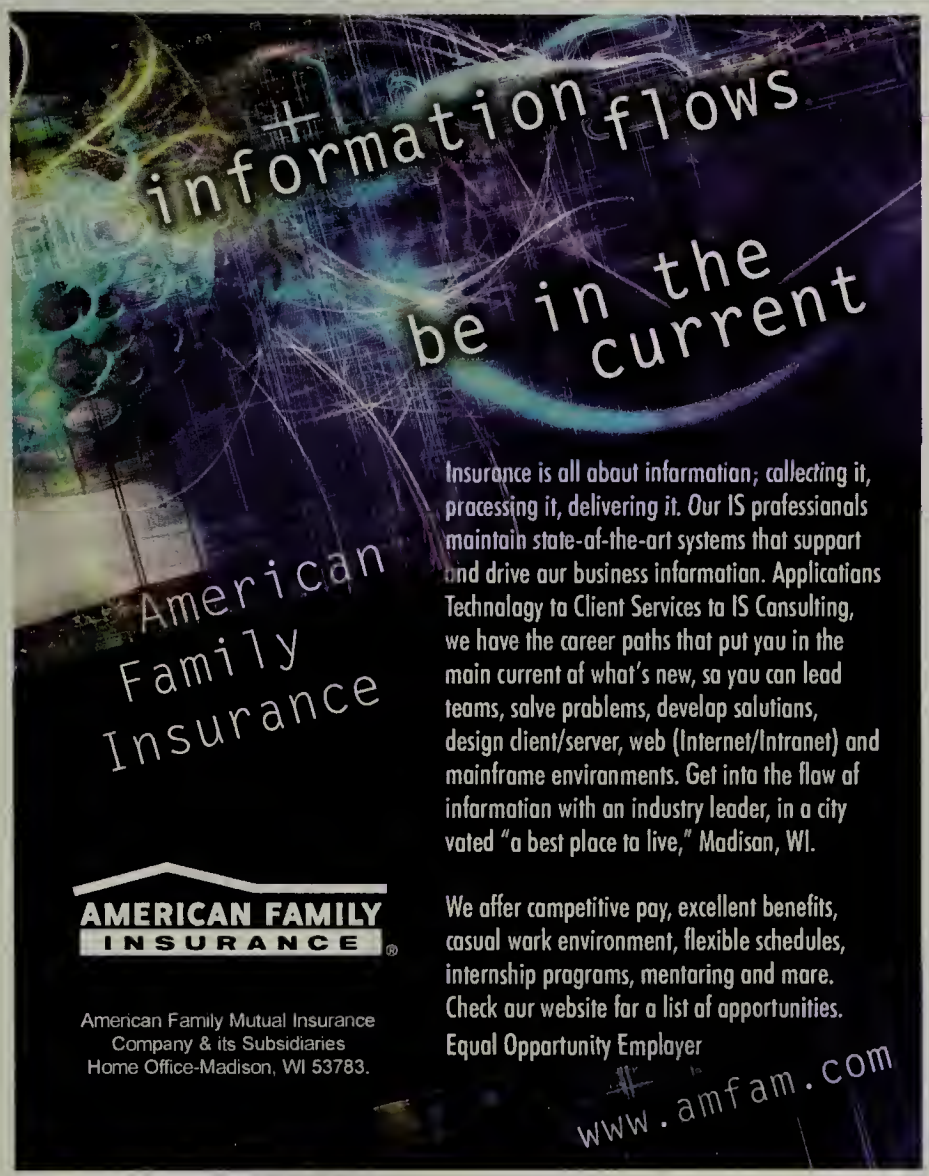
See www.dtsearch.com for hundreds more reviews & case studies

1-800-IT-FINDS • www.dtsearch.com

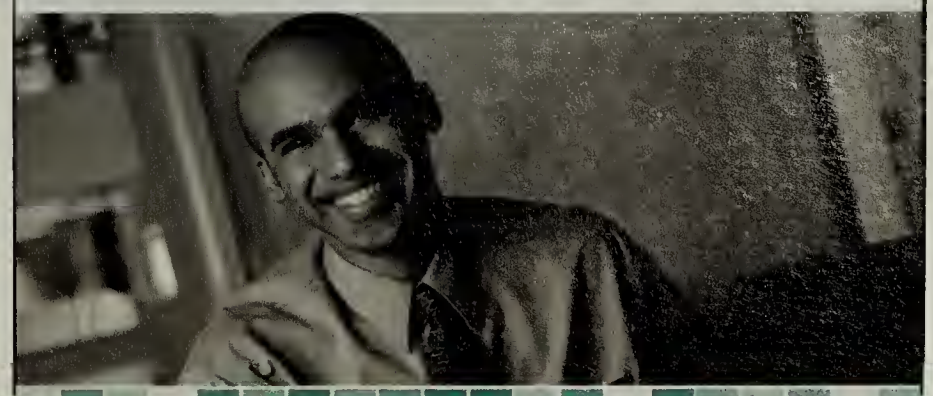
Reach Respected IT Leaders in COMPUTERWORLD Marketplace Advertising Section

The Computerworld Marketplace advertising section reaches more than 1.8 million IT decision makers every week. Marketplace advertising helps Computerworld readers compare prices, search for the best values, locate new suppliers and find new products and services for their IT needs.

To advertise, call 212-655-5157
or email print@ven.com



skills | recognized



National City celebrates five years in a row as one of *Computerworld*'s "100 Best Places to Work in IT."

We encourage you to investigate the many challenging and exciting career opportunities we have to offer.

Visit NationalCity.com/careers to see the current opportunities available at National City.

COMPUTERWORLD 100 BEST PLACES TO WORK IN IT 2005

National City

NationalCity.com | © National City Corporation. CS-19428

National City Corporation subsidiaries and member banks are Equal Opportunities Employers. National City does not hire people in F-1 or J-1 status for trainee positions. National City requires candidates to submit to pre-employment drug screening.

Computer Business Analyst needed w/Bachelors or Foreign Equiv. in Engg. or Comp. Scie. or Buss. Adm. & 1 yr exp to plan, analyze, design, develop, test & implement functional specifications for an online application. Create requirements, design functional specifications, test documents & project plans. Perform tests & develop web applications using Java, WebStart, SWING, JNLP, XML, JSP & Oracle in Unix, Sun Solaris & Windows environment. Interact w/clients & participate in the product marketing through research, presentations, conferences & exhibitions. Provide technical support. Mail resumes to: Algomod Technologies Corp., 116 John St., Suite #1406, NY, NY 10038. Job Location: New York, NY.

IT PROFESSIONALS

Visit our website for complete details on these opportunities.

- **Data Architect Jr. Level** DB2/UDB
- **Enterprise Architect** Mainframe, Unix, EMC
- **Mumps Programmer / Analyst** CACHE, IDX
- **Oracle Apps. Administrator** SQL, Unix, Oracle Rpts
- **Oracle DBI Analyst**
- **Oracle OM Functional Analyst**

Contact us in confidence:
Personnel Resource, Inc.
716-634-4194,
fax 716-633-6779

Email:
prinorth@perresource.com
Website at:
www.perresource.com

Software Engineer: Responsible for Requirement Collection, Feasibility Analysis, Technical Design, Development, and Review to automate processing and to improve existing computer systems. Perform software quality control testing of systems and applications developed in a cross-platform environment utilizing Win Runner and Load Runner. Install, configure and tune application servers and web servers like Oracle Application Server, Weblogic, Windows Server, and IIS. Perform database design for different databases in web and enterprise applications like Oracle, SQL Server, and TOAD. Undertake .Net and other web development methodologies using VB.NET, C#, and J2EE. Work on multiple operating systems like Unix and Windows NT/2000. Masters or Equivalent in Computer Science, MIS, CIS, Engineering (any field), Business, Technology, Mathematics or related field. Minimum one year of experience in the computer related field in the above job duties. Salary will commensurate with experience. Please email your resume to: faisal@macrosoftinc.com or mail to: Macrosoft, Inc., 2 Sylvan Way, 3rd Floor, Parsippany, NJ 07054.

ATTENTION:

Law Firms IT Consultants Staffing Agencies

Place your Labor Certification ads here!

Are you frequently placing legal or immigration advertisements?

Let us help you put together a cost effective program that will make this time-consuming task a little easier.

Contact *800-762-2977*

IT | careers

Computer Programmer for OH based IT firm to convert project specifications,statements of problems and procedures to detailed design and logical flow charts for coding into software programs. Design, development, testing and deployment software applications and methodologies. Apply with 2 copies of resume to H.R.D, Haicyon Solutions, Inc., 950 D Taylor Station Road, Columbus, Ohio 43230.

What happens when you put nearly 3,000 people in the driver's seat?

They really take you places!

FORTUNE 100 BEST COMPANIES TO WORK FOR 2005

At Quicken Loans, the drive of every team member has put us near the top of FORTUNE Magazine's 100 Best Companies to Work For, and made us the #1 Online Lender in the nation!

Bring your energy and passion to our growing team. We have career opportunities in IT as well as a growing demand for Mortgage Bankers. Log onto **www.quickenloanscareers.com** to find out more!

Quicken Loans

Join our growing team. Go to quickenloanscareers.com

Proud to be among ComputerWorld's 100 Best!

We are ISC.
We encourage new ideas.
We explore new technologies.
We work without boundaries.
We draw on each other's expertise.
We meet our client's expectations.
We get the job done.

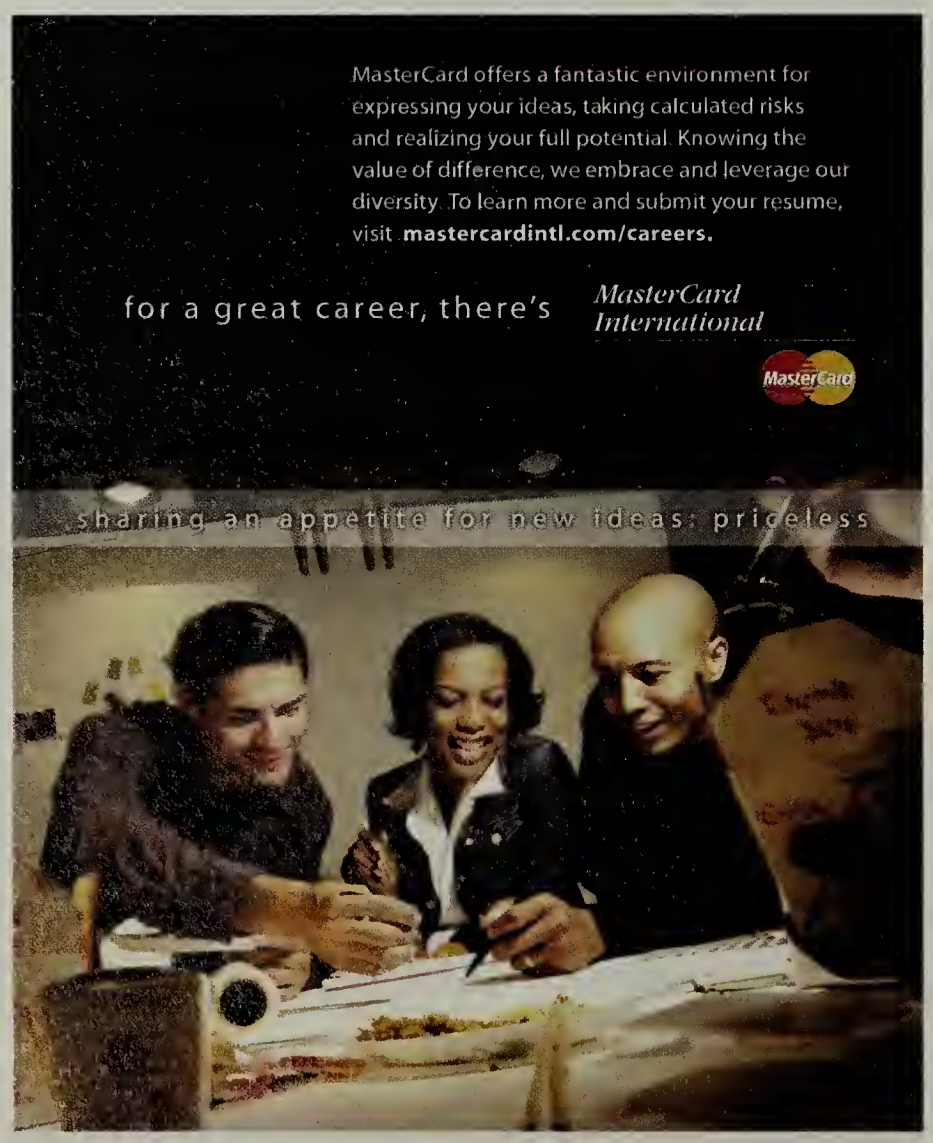
Congratulations and thanks to all of ISC.

Robin Beck
Vice President
Information Systems & Computing

Penn: motivated, collaborative, flexible, diverse, with great HR programs and benefits!

Penn
University of Pennsylvania

Learn more at **www.upenn.edu/computing**



Work with growing software development team developing secure, scalable web-based search engine software using XML, HTML, ColdFusion, MS SQL, JAVA and other web services. Credentrust Software, Inc. Fax resume to 949-955-0041 or send to 17682 Mitchell No. Suite 205 Irvine, CA 92614.

Programmer Analyst for Sarvian, Dayton, OH: responsible for complete life cycle of project using: C++, Java, Java Script, Visual Basic, VB Script, HTML, DHTML, Active Server Pages, XML, cascading style sheet, OLE DB, OLE Automation and OLE Control, DCOM, and ActiveX. 40 Hrs. week, Competitive Salary, Masters degree with 3-6 Months experience required. Send resume to SarvianInternational, Inc.; 42 WoodcroftTrail; Dayton, OH 45430

Computer Manager - Jefferson, LA: Jefferson Coin & Bullion, Inc. needs exp. professional to plan, direct, coordinate activities in information systems using Oracle, 4D Database, Veritas Clusters, Cisco, Foundry Networks, VPN, Mac & Windows. Streamline the IT process. Competitive salary with benefits. Please send resume to Jefferson Coin & Bullion, Inc., 2400 Jefferson Highway, Jefferson, LA 70121.

Want a great career?
The more you know...the further you'll go.

Computerworld's CareerMail E-mail Newsletter

Arm yourself with the tools you'll need to excel in your career by having the latest information on IT careers-related issues delivered straight to your desktop.

Recruiting & job searching ▪ training & certification ▪ contracting and IT skills.

Computerworld CareerMail
March 22, 2005

In this issue:

* Group offers Sarb-Ox certification program
* Group seeks portfolio management answers
* H-1B fraud investigations are expected to increase
* CIO success: nature or nurture?
* Changing IT's rep through small talk
* The recruiter's call ... and other windows of opportunity
* Industry newsletter Web sites grow with online job searches

Sign up today for this FREE e-mail newsletter!
www.computerworld.com

INNOVATION AND STABILITY!

You get the best of both worlds as an IT Professional at J.B. Hunt Transport. Develop cutting-edge IT solutions for a rock-solid business. And do it in a scenic, natural environment that offers both big-city amenities and small-town serenity.

J.B.Hunt is one of the world's largest and most progressive transportation services companies. We have consistently ranked in the top third of Computerworld's "100 Best Places to Work in IT" and are featured in Forbes' Platinum List of America's Best Managed Big Companies, as well as Training Magazine's "Top 100 in Training."

We're located in the Ozark foothills near the University of Arkansas' main campus and the headquarters of Fortune 500 companies such as Wal-Mart and Tyson Foods. We offer competitive pay/benefits and a generous relocation package.

Applications (Java, J2EE, Struts, ILOG, HTML, XML, PeopleSoft, LotusNotes, WebFocus, COBOL II, CICS, DB2, UDB, MS SQL, MQ Series, Hyperion OLAP, BizLink,)

Environment (Windows XP 2000/2003, AIX, Z/OS Mainframe, AS/400, EMC, Cisco, Dell, IBM eSeries)

J.B. HUNT TRANSPORT, INC.
Email: david_martin@jbhunt.com
Check our website for detailed job listings
http://www.jbhunt.com
EOE. Subject to drug screen

J.B. HUNT

COMPUTERWORLD 100 BEST PLACES TO WORK IN IT 2005

Software Engineer: Data warehousing, decision support, OLAP, business intelligence systems, web development, ERP/CRM solutions. Require Bachelor's Degree or equiv. in Compu. Sci, or Electronics/ Electrical Engg, or equiv., plus 5 years relevant work exp. Employer will accept a comb. of multiple degrees and/or work exp. to be equiv. to Bachelor's Degree. Perm. US work auth. reqd. Contact: Silver Technologies, Inc., 648 Holmdel Rd, Suite 300, Hazlet, New Jersey 07730. Attn. N. Niraula.

Computer Professional NJ based IT firm:
Sr. Level Positions, IT Manager, MIS Manager, ITS Director needed to plan, direct, or coordinate activities in such fields as electronic data processing, information sys, sys analysis & comp programming.
Jr. Level Positions, Progmr Analysts, S/w Engrs, Sys Analysts, Database Administrators, Network Administrators to develop, create, and modify general computer appli'ns s/w or specialized utility programs. Analyze user needs & dvlop s/ware solutions. Apply with 2 copies of resume to Millennium Information Tech. 666 Plainsboro Road Ste 455 Plainsboro NJ-08536.

OUR PEOPLE MAKE THE Difference

WAL★MART Stores, Inc.

We're Looking for the Future Leaders of Tomorrow

Wal-Mart Stores, Inc. has been recognized by Fortune Magazine as the most admired company in the world. As our company continues to expand, so does the opportunity for first-class, talented people to guide the future of one of the most successful and innovative growth companies in the world.

Put your career on a fast climb and help us continue to set the industry standard in information technology.

- UNIX - C, C++, Administration, Engineering, Informix DBAs
- Windows - Clients/Servers - VB, VC++, Java, ASP, XML
- IBM Mainframe - COBL, CICS, DB2 and IMS DBAs
- Networking - Ethernet, VSAT, Frame Relay, ATM
- Telecommunications

All positions are located in Bentonville, AR.

Ready to do it all? Candidates interested in joining our team should forward a resume to:

Wal-Mart Information Systems Division
Attn: Recruiting Department
805 Moberly Lane M41
Bentonville, AR 72716-0560
E-mail: ISDADS@wal-mart.com

For more information,
visit our Web site at:
www.walmartstores.com

Wal-Mart Is An Equal Opportunity Employer. M/F/D/V
©2005 Wal-Mart Stores, Inc.

Ads Placed Weekly

Didn't find the IT Career Opportunity you were looking for?

Check back weekly for fresh job listings placed by top companies looking for skilled IT professionals like you!

IT|careers
800-762-2977

SOCIAL SECURITY ADMINISTRATION USA

www.socialsecurity.gov
EOE/ADA

THE SOCIAL SECURITY ADMINISTRATION IN WOODLAWN, MD is seeking highly motivated IT Professionals for the following types of positions:

- Mainframe Developers (COBOL, CICS)
- Internet Developers (Java, WebSphere, CGI)
- Database Administrators (DB2, IDMS, Oracle)
- Systems Operation Analysts (SUN/UNIX, JCL, TSO/ISPF, z/OS, Control M)
- Systems Analysts (policy/planning/analysis)

COME JOIN OUR WINNING TEAM!

We offer:

- **Competitive salaries — RANGE: $54,287–$88,010**
- **A Comprehensive benefits package including**
  - **— Retirement savings investment plan**
  - **— Health, life and long term insurance for self and family**
- **Paid vacations, sick leave and 10 paid holidays**
- **Paid overtime and ongoing technical training and**
- **Flexible work schedules.**

All of this and a positive, productive work environment!

To apply go to USAJOBS at:
***http://jobsearch.usajobs.opm.gov/* and select the Social Security Administration. Must be a United States citizen to apply.**

"DIVERSITY IN PRODUCTS, SERVICES AND PEOPLE"

tech·nol′o·gy

(tek-nol′ə-je) *n.* we're IT

miamidade.gov

Winner, Best of the Web
Center for Digital Government, 2004

Winner, Best in Class
National Association
of County Information Officers, 2004

Winner, Special Achievement in GIS
ESRI, 2005

Winner, 100 Best Places to Work in IT
Computerworld, 2005

Visit www.miamidade.gov/technology. Click the IT Jobs link for winning career opportunities.

MIAMI-DADE COUNTY

Delivering Excellence Every Day

Multiple full time positions in Cleveland, OH and Coral Springs/Miami Beach, FL, in a bank setting: (i) Financial Analyst I: Cleveland, OH: Conduct quantitative analyses of information affecting investment programs of public or private institutions. Conduct analyses and research in such areas as financial and expense performance, rate of return, depreciation, working capital and investments. Require MBA Degree and a Bachelor's Degree. Employer will accept a combination of education and experience including a combination of multiple degrees for being equivalent to a Bachelors Degree. (ii) Financial Analyst II: Cleveland, OH: Conduct quantitative analyses of information affecting investment programs of public or private institutions. Conduct analyses and research in such areas as financial and expense performance, rate of return, depreciation, working capital and investments. Require Bachelor's degree in Finance, Accounting, Auditing or Economics, or Business Administration, plus 1 year's work exp. in the job offered, or at least 1 year's work exp. in the related occupation of an Investment Intern, Equity Research Analyst or Financial Analyst. Employer will accept a combination of education and experience including a combination of multiple degrees for being equivalent to a Bachelors Degree, or combination of diploma or Associates degree plus work experience for being equivalent to a Bachelors Degree. (iii) Financial Analyst III: Cleveland, OH: Conduct quantitative analyses of information affecting investment programs of public or private institutions. Conduct financial, discounted cash flow analysis, bond and stock valuation, cost of capital analysis, evaluation of asset's risk and return, and applications of real options in investment (ROI) analysis. Develop an analytical reporting package that will operate trading opportunities using advanced modern statistical methods in the three general areas: Options rich/cheap (Mortgage-Backed Securities, Treasury cash futures), Mortgage-Treasury spreads, and Mortgage coupon and FN/GN/FM. Conduct statistical and mathematical modeling. Require Masters and Bachelors Degrees in Mathematics or Applied Economics, or equiv. Employer will accept a combination of education and experience including a combination of multiple degrees for being equivalent to a Bachelors Degree. (iv) Programmer Analyst: Cleveland, OH: Provide day-to-day technical support for the Local and Wide Area Network hardware and software for PC and LAN environments in Windows NT/4.0 and Novell 4.x platforms. Conduct hardware and software implementation and troubleshooting activities. Diagnose and assist in the resolution of network configuration and implementation issues for the computer systems. Install and configure the Novell and NT Server and perform production support and troubleshooting. Require Bachelors degree in Computer Science, or equiv, plus 1 year's work exp. Employer will accept a combination of education and experience including a combination of multiple undergraduate degrees and work experience for being equiv. to a Bachelors Degree. Permanent US work authorization required. Send Resume for positions (i) to (iv) to: Ohio Savings Bank, 1801 E 9th Street, Ste 200, Cleveland, OH 44114. EOE. Attn: Irina Desiatnikov. (v) Financial Manager: Multiple positions, Coral Springs and Miami Beach, FL: Exercise administrative control over the functions of a branch office, including implementation and explanation of bank policy, programs and objectives; extend credit to individuals through a variety of real estate loan programs and refer business for investment services, commercial loans and other bank products and services. Require Bachelor Degree in Business Admin. or equiv. plus 1 yr work exp as an Accountant or Bank Mgr. Require permanent US work auth. For positions (v) send resume to Ohio Savings Bank or AmTrust Bank, 447 Arthur Godfrey Rd., Miami Beach, Florida 33140. Attn. HR.

Programmer Analysts (P/A) & Software Engineers (S/E) for Plano, TX and Chicago, IL. P/A: Design & Develop software using C++, Oracle, Sybase, XML, UML, Coolgen, Interwoven, ClearCase, ClearQuest, Plumtree, ITS, PVCS, UNIX. Bachelors or Eqv. req'd in Computers, Eng, Math or any related field of study + 2 yrs of related exp. S/E: Design, develop & test software using Java, C, C++, VB, Winrunner, Tuxedo, Eclipse, Corba, RMI, RUP. Masters or Equivalent** req'd in Computers, Eng., Math or related field of study + 1 yr of related exp. (**Eqv.: Bachelors or Eqv. + 5 yrs of progressive related work exp). May be relocated to various unanticipated locations throughout the US. 40 hrs/Wk. Must have legal authority to work permanently in the U.S. Send resume to HR, Stellar Software Network, Inc., 3601 Estacado Ln, Plano TX 75025.

Sr. Programmer Analyst: IntraSearch seeks applicants for the position of Sr. Programmer Analyst in Centennial, CO to design and develop custom GIS and CRM software applications. Requirements include master's degree or equivalent (bachelor's degree plus 5 yrs progressive exp) in computer science, engineering or related field including industry energy management and background in CRM software development using COM/DCOM. Requirements also include working knowledge of active directories. Respond by resume to Lisa Livermore, IntraSearch, 12424 E. Weaver Pl, #100, Centennial, CO 80111.

Top 10 reasons why you should advertise your recruitment message with IT Careers.

IT Careers Audience Skill Survey 2003/2004

- Client Operating Systems 93%
- IS/MIS/IT 87%
- Server/Host Operating Systems (NET) 84%
- Windows 2000 80%
- LAN/WAN Environment (NET) 73%
- Languages & Tools (NET) 72%
- Windows NT 72%
- Dev. Tools/Environments 68%
- Software/Applications Dev. 67%
- Networking/Telecom 66%

Your direct line of communication to qualified IT Professionals with the most in-demand IT skills.

IT | careers

800-762-2977

Visit us online at www.itcareers.com

CW062705E/MW/W 4

Do Your Career Justice

Thomson West, the leading provider of information solutions to the U.S. legal industry, is proud to be one of *Computerworld* magazine's "Best Places to Work in IT" for the past four years.

These awards recognize our core commitment to technology, work/life balance, and education. At Thomson West, we provide the tools, environment and opportunities necessary to succeed. A division of the Thomson Corporation, itself a $8.1 billion worldwide company focused on providing web-based information, we tap into the most innovative technology to serve our customers.

Learn more about our world-class technology, work environment and people. Check us out online at west.thomson.com, or apply online at west.thomson.com/careers. EOE

THOMSON ™ WEST

COMPUTERWORLD 100 BEST PLACES TO WORK IN IT 2004

Visit us online for details: www.west.thomson.com

Software Engineer. Web development with client and server side scripting; desktop application development, database design and development, data transger services, requirement analysis, and definition of solution architectures with two and three tier designs; act as technical lead of one or more junior programmers if needed; communicate with high management of Canton Group. Must have Bachelor's degree in Computer Science, Eng. or related, 2 yrs experience and knowledge of ASP, ASP.NET, HTML/DHTML, VB Script, C# and COM/COM+. Send resume to: The Canton Group, LLC, Attn: Oachla Garcia, 2929 O'Donnell St., Baltimore, MD 21224.

Programmer Analyst

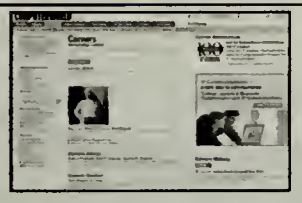
Avista Management Inc. Orlando, FL seeks software professional with strong software development skills to design, develop and implement web-based applications. Experience in Java, JSP, Oracle, DB2, SQL, Websphere, STRUTS, WSAD, Mainframe/AS400 required. Email resume to: lisa@avista.com.

Senior Software Engineer, Atlanta - Develop web-based solutions of business applications utilizing object methodologies. Tasks include, developing and maintaining web applications using connectivity tools interfacing with data residing in MS Access and Oracle databases, creating and maintaining detail design documentation, implementation, and providing user support. Five or more years of advanced experience across the software development life cycle, from original analysis to support is required. Required skills include experience using Crystal Reports, White-box testing techniques, 3/2 tier client server architecture, Active Server pages, Visual Basic, IIS, VB Script, Java Script, HTML, ADO, ActiveX, Visual Interdev, Microsoft Windows, Unix, and Linux. Strong knowledge of Oracle and MS Access Database is required. Must have the desire and ability to work with older technologies, work under close supervision, work under pressure, meet deadlines, and manage multiple tasks. A Masters of Science degree or equivalent in Computer Science or related field is required. We provide competitive salary and benefits. Only persons with indefinite right to work will be considered. Please send resume demonstrating all minimum requirements to: Warren Newman, National Distributing Company Inc.. 1 National Drive SW, Atlanta Ga. 30336.

Software Engineers needed with EAI/J2EE. Mail to Net Android, 7810 S Hardy Dr., #108, Tempe AZ 85284 or fax to (480 664-9392).

Computer Programmer utilizing VB, C#, & .net technologies to work in Pasadena. Req. Bachelor's Degree in Computer Sci. or Computer Eng'g with 1 yr exp. Mail resumes to Fidelity National Data Services c/o FIS 14 Piedmont Ctr N.E., # 800, Atlanta, GA 30045 or fax (404) 442-4299.

Computerworld's Careers Knowledge Center



Get the latest industry news, as well as valuable job-seeking and career enhancement advice.

Read about IT-related issues such as:

- Hiring/recruiting
- Education/training
- Consulting/contracting
- Skills

Remember, knowledge is power, and the Careers Knowledge Center is the place to get it!

www.computerworld.com

Edison International is proud to be honored for the eighth year in a row as one of Computerworld's *"100 Best Places to Work in IT"*

Please visit our career site at www.edison.com

EDISON INTERNATIONAL®

All our desks come with a view.

Join us, and we'll put some of the most exciting challenges in business in front of you. Opportunities to work on some of the biggest, most prestigious brands in the global market. And we'll put the knowledge, experience and support of the best talent in the industry behind you. Get the big picture. ey.com/us/careers

Audit • Tax • Transaction Advisory Services

ERNST & YOUNG

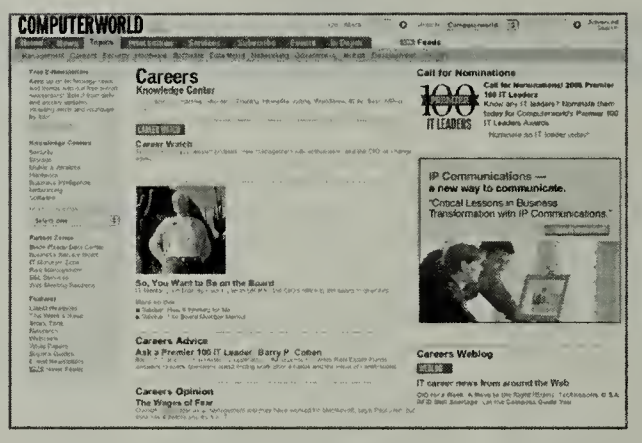
Quality In Everything We Do

©2005 Ernst & Young LLP

Find out how to get the most out of your job search and your career.

Computerworld's Careers Knowledge Center

Get the latest industry news, as well as valuable job-seeking and career enhancement advice.



Read about IT-related issues such as:

- Hiring/recruiting
- Education/training
- Consulting/contracting
- Skills

Computerworld CareerMail
March 22, 2005

In this issue:

* Group offers Sarb-Ox certification program
* Group seeks portfolio management answers
* H-1B fraud investigations are expected to increase
* CIO success: nature or nurture?
* Changing IT's rep through small talk
* The recruiter's call ... and other windows of opportunity
* Industry newsletter Web sites grow with online job searches

Computerworld's CareerMail E-mail Newsletter

Arm yourself with the tools you'll need to excel in your career by having the latest information on IT careers-related issues delivered straight to your desktop.

Recruiting & job searching ▪ training & certification ▪ contracting and IT skills.

The more you know...the further you'll go.

www.computerworld.com
or call 800-762-2977

COMPUTERWORLD HEADQUARTERS

One Speen Street, P.O. Box 9171
Framingham, MA 01701-9171
Phone: (508) 879-0700
Fax: (508) 875-4394

PRESIDENT/CEO
Bob Carrigan
(508) 820-8100

EXECUTIVE ASSISTANT TO THE CEO
Nelva Riley
(508) 820-8105

VICE PRESIDENT/ GENERAL MANAGER ONLINE
Martha Connors
(508) 620-7700

EXECUTIVE VICE PRESIDENT/ STRATEGIC PROGRAMS
Ronald L. Milton
(508) 820-8661

DIRECTOR/ HUMAN RESOURCES
Piper Sheer
(508) 820-8162

EXECUTIVE VICE PRESIDENT/COO
Matthew C. Smith
(508) 820-8102

EXECUTIVE VICE PRESIDENT/ PUBLISHER
Matthew J. Sweeney
(508) 271-7100

VICE PRESIDENT/ EDITOR IN CHIEF
Don Tennant
(508) 620-7714

VICE PRESIDENT/CIRCULATION
Debbie Winders
(508) 820-8193

CIRCULATION
Sr. Circulation Specialist/Diana Turco, (508) 820-8167

PRODUCTION
Vice President Production/Carolyn Medeiros; Production Manager/Kim Pennett; **Print Display Advertising:** (508) 820-8232, Fax: (508) 879-0446; **DISTRIBUTION:** Director of Distribution and Postal Affairs/Bob Wescott

MARKETING
Director of Marketing/Matt Duffy, (508) 820-8145

STRATEGIC PROGRAMS AND EVENTS
Vice President Strategic Initiatives/Leo Leger; Vice President Business Development/John Amato; Director, Event Sponsorship Sales/Ann Harris; Vice President, Event Marketing and Conference Programs/Derek Hulitzky; Director, Event Management/Michael Meleedy; Sr. Marketing Specialist/Timothy Johnson; Sr. Marketing Specialist/Matthew Wintringham; Sales Programs Specialist/Colin Longval; Executive Programs Specialist/Deborah Lee; Custom Events Specialist/Chris Leger; Audience Development Coordinator/Shari Ebb, One Speen Street, Box 9171, Framingham, MA 01701-9171, (508) 879-0700, Fax: (508) 626-8524

ONLINE ADVERTISING
Vice President of Online Sales, Gregg Pinsky, (508) 271-8013; Director of Online Sales/Sean Weglage, (415) 978-3314, Fax: (415) 543-8010; Online Account Executive/Thanh Tu, (415) 978-3309, Fax: (415) 543-8010 ; Online Sales Assistant/Kathy Snow (508) 270-7112; One Speen Street, Box 9171, Framingham, MA 01701-9171, Fax: (508) 270-3882

IT CAREERS ADVERTISING SALES OFFICES
Sales & Marketing Associate/Deborah J. Green, (508) 520-7757, Fax: (508) 879-0184, One Speen Street, Framingham, MA 01701; Eastern Regional Manager/Jay Savell, (610) 758-9755, Fax: (610) 419-2134; Director of Sales/Laura Wilkinson, (847) 441-8877

LIST RENTAL
POSTAL: Rich Green, (508) 370-0832, e-mail: rgreen @idglist.com. **E-Mail:** Christine Cahill, (508) 370-0808, e-mail: ccahill@idglist.com. **MAILING ADDRESS:** IDG List Services, P.O. Box 9151, Framingham, MA 01701-9151, Fax: (508) 370-0020

COMPUTERWORLD SALES OFFICES

EXECUTIVE VICE PRESIDENT/PUBLISHER
Matthew J. Sweeney
(508) 271-7100
Fax: (508) 270-3882

SALES BUSINESS MANAGER
Laureen Austermann
(508) 820-8522
Fax: (508) 270-3882

NORTHWESTERN STATES

ACCOUNT DIRECTOR: Jim Barrett (415) 978-3306; **ACCOUNT EXECUTIVE:** SaraJane Robinson-Retondo (415) 978-3304, 501 Second Street, Suite 114, San Francisco, CA 94107, Fax: (415) 543-8010

BAY AREA

ACCOUNT DIRECTORS: Jim Barrett (415) 978-3306, Sara Culley (415) 978-3307; **ACCOUNT EXECUTIVES:** Emmie Hung (415) 978-3308, SaraJane Robinson-Retondo (415) 978-3304, 501 Second Street, Suite 114, San Francisco, CA 94107, Fax: (415) 543-8010

SOUTHWESTERN STATES

ACCOUNT DIRECTOR: Bill Hanck (949) 442-4006; **ACCOUNT EXECUTIVE:** Jean Dellarobba (949) 442-4053, 19200 Von Karman Avenue, Suite 360, Irvine, CA 92612, Fax: (949) 476-8724

EASTERN CENTRAL STATES/ INDIANA

ACCOUNT DIRECTOR: Peter Mayer (201) 634-2324; **ACCOUNT EXECUTIVE:** John Radzniak (201) 634-2323, 650 From Road - 2nd Floor, Paramus, NJ 07652, Fax: (201) 634-9289

CENTRAL STATES

ACCOUNT DIRECTOR: Bill Hanck (949) 442-4006; **ACCOUNT EXECUTIVE:** Jean Dellarobba (949) 442-4053, 19200 Von Karman Avenue, Suite 360, Irvine, CA 92612, Fax: (949) 476-8724

NEW ENGLAND STATES

ACCOUNT MANAGER: Deborah Crimmings (508) 271-7110, One Speen Street, Framingham, MA 01701, Fax: (508) 270-3882, **SALES ASSOCIATE:** Jessica Bibeau (508) 271-7108, One Speen Street, Framingham, MA 01701, (508) 879-0700, Fax: (508) 270-3882

METRO NEW YORK

ACCOUNT DIRECTOR: Peter Mayer (201) 634-2324; **ACCOUNT EXECUTIVE:** John Radzniak (201) 634-2323, 650 From Road - 2nd Floor, Paramus, NJ 07652, Fax: (201) 634-9289

SOUTHEASTERN STATES

ACCOUNT DIRECTOR: Lisa Ladle-Wallace (904) 284-4972, 5242 River Park Villas Dr., St. Augustine, FL 32092, Fax: (800) 779-8622, **SALES ASSOCIATE:** Jessica Bibeau (508) 271-7108, One Speen Street, Framingham, MA 01701, (508) 879-0700, Fax: (508) 270-3882

ADVERTISER'S INDEX

Aflac 37
www.aflac.com
American Power Conversion 9
www.apcc.com
888-289-APCC
Best Practices in Mobile & Wireless Awards 34
www.mwwusa.com
Canon 2-3
www.imagerunner.com
CDW Corporation 53
www.cdw.com
Chicago Mercantile Exchange 55
www.cme.com
Cingular 13
www.cingular.com
Cisco 57
www.cisco.com
CompTIA 68
asc.comptia.org/cw
Dell 20-21
www.dell.com
Discover Financial Services 41
www.discoverfinancialjobs.com
dtSearch 68
www.dtsearch.com
EMC 31
www.emc.com
Enterprise Management World 40
www.emwusa.com/cw
Harrah's Entertainment 49
www.harrahs.com
Hewlett-Packard 11, 65*
www.hp.com
Hitachi 58-59
www.hds.com
HSBC 35
www.joinhsbcusa.com
IBM 42-43, 46-47
www.ibm.com
Intel 17
www.intel.com
InterSystems 15
www.intersystems.com
IT Management Summit 18
www.itmanagementsummit.com
Mobile & Wireless World Best Practices 34
www.mwwusa.com
Nemours 61
www.nemours.org
Oracle Corp. 80
www.oracle.com
Pacificare 67
www.pacificare.com
Robert Half Technology 24
www.rht.com
SAIC 63
www.saic.com
SAP 27
www.sap.com
SAS 4, 33
www.sas.com
Sony VAIO 28-29
www.sony.com
Sun Microsystems 79
www.sun.com
United States Postal Service 51
www.usps.com
Verizon Wireless 39
www.verizonwireless.com
Websense 19
www.websense.com

*Regional Select Edition

This index is provided as an additional service. The publisher does not assume any liability for errors or omissions.

INTERNATIONAL DATA GROUP

CHAIRMAN OF THE BOARD
Patrick J. McGovern

CEO
Pat Kenealy

COMPUTERWORLD is a business unit of IDG, the world's leading technology media, research and event company. IDG publishes more than 300 magazines and newspapers and offers online users the largest network of technology-specific sites around the world through IDG.net (www.idg.net), which comprises more than 330 targeted Web sites in 80 countries. IDG is also a leading producer of 168 computer-related events worldwide, and IDG's research company, IDC, provides global market intelligence and advice through 51 offices in 43 countries. Company information is available at www.idg.com.

IDG

Have a problem with your Computerworld subscription?

We want to solve it to your complete satisfaction, and we want to do it fast.
Please write to: **Computerworld, P.O. Box 3500, Northbrook, IL 60065-3500.**

Your magazine subscription label is a valuable source of information for you and us. You can help us by attaching your magazine label here, or copy your name, address, and coded line as it appears on your label. Send this along with your correspondence.

ADDRESS CHANGES OR OTHER CHANGES TO YOUR SUBSCRIPTION
All address changes, title changes, etc. should be accompanied by your address label, if possible, or by a copy of the information that appears on the label, including the coded line.

YOUR NEW ADDRESS GOES HERE: **ADDRESS SHOWN:** ❑ Home ❑ Business

NAME

TITLE COMPANY

ADDRESS

CITY STATE ZIP

OTHER QUESTIONS AND PROBLEMS
It is better to write us concerning your problem and include the magazine label. Also, address changes are handled more efficiently by mail. However, should you need to reach us quickly, the following toll-free number is available: **(888) 559-7327 Outside U.S. call (847) 559-7322.**
Internet address: cw@omeda.com

COMPUTERWORLD allows advertisers and other companies to use its mailing list for selected offers we feel would be of interest to you. We screen these offers carefully. If you do not want to remain on the promotion list please write to the following address – COMPUTERWORLD, Circulation Department, One Speen Street, Framingham, MA 01701.

NAME
TITLE COMPANY
ADDRESS
CITY

How to Contact COMPUTERWORLD

We invite readers to call or write with their comments and ideas. It is best to submit ideas to one of the department editors and the appropriate beat reporter.

Don Tennant,
editor in chief
(508) 620-7714

Mitch Betts,
executive editor
(301) 262-8243

Julia King,
executive editor, events
(610) 532-7599

DEPARTMENT EDITORS

Craig Stedman, News editor ..... (508) 820-8120
Mike Bucken, assistant News editor ..... (508) 820-8562
Tommy Peterson, Technology editor ..... (508) 620-7729
Kathleen Melymuka, Management editor ..... (508) 820-8118

REPORTERS

Matt Hamblen, networking: mobile/wireless; network/systems management ..... (508) 820-8567
Heather Havenstein, business intelligence; application development; Web services; application server software; health care ..... (919) 366-0381
Thomas Hoffman, IT management and investment issues; careers/labor; energy industry ..... (845) 988-9630
Lucas Mearian, storage; disaster recovery and business continuity; financial services industry ..... (508) 820-8215
Linda Rosencrance, general assignment; transportation and automotive industries ..... (508) 628-4734
Carol Sliwa, Windows; Linux; RFID; retail industry ..... (508) 628-4731
Marc L. Songini, ERP; supply chain; CRM; databases; food and agribusiness ..... (508) 820-8182
Patrick Thibodeau, enterprise systems; Unix; outsourcing and immigration; antitrust issues ..... (202) 333-2448
Jaikumar Vijayan, corporate security/privacy issues; manufacturing industry ..... (630) 978-8390
Todd R. Weiss, general assignment; open-source community; intellectual property issues; messaging/collaboration ..... (717) 560-5255

OPINIONS

Frank Hayes, senior news columnist ..... (503) 252-0100

FEATURES

Ellen Fanning, special projects editor ..... (508) 820-8204
Robert L. Mitchell, senior editor ..... (508) 820-8177
Mark Hall, editor at large ..... (503) 391-1158
Gary H. Anthes, national correspondent ..... (703) 536-9233
Julia King, national correspondent ..... (610) 532-7599

COMPUTERWORLD.COM

Martha Connors, vice president/general manager ..... (508) 620-7700
Ian Lamont, online projects editor ..... (508) 820-8187
Sharon Machlis, managing editor/online ..... (508) 820-8231
Ken Mingis, online news editor ..... (508) 820-8545
Marlan Prokop, online editor at large ..... (508) 620-7717
David Ramel, e-mail newsletter/online editor at large ..... (508) 820-8269
John R. Brillon, associate art director ..... (508) 820-8216

Peter Smith, Web development manager
Kevin Gerich, Mark Savery, Web developers

RESEARCH

Mari Keefe, research manager
Gussie Wilson, research associate

COPY DESK

Michele Lee DeFilippo, managing editor/production ..... (508) 820-8126
Bob Rawson, assistant managing editor/production ..... (508) 271-8015

Mike Parent, Monica Sambatare, senior copy editors
Eugene Demaitre, copy editor

GRAPHIC DESIGN

Stephanie Faucher, design director ..... (508) 820-8235

April O'Connor, associate art director
Julie Quinn, senior designer
Susan Cahill, graphics coordinator
John Klossner, cartoonist

ADMINISTRATIVE SUPPORT

Linda Gorgone, office manager ..... (508) 820-8176

CONTRIBUTING EDITOR

Jamie Eckle, Opinions ..... (617) 596-1873

CONTRIBUTING COLUMNISTS

Michael Gartenberg, Dan Gillmer, Paul Glen, Barbara Gomolski, John Halamka, Thornton A. May, David Moschella, Bart Perkins, Virginia Robbins, Bruce A. Stewart

CONTRIBUTINO WRITERS

Mary Brandel, Stacy Collett, Russell Kay, Mary K. Pratt, Drew Robb

GENERAL INFORMATION

TELEPHONE/FAX

Main phone number .... (508) 879-0700
All editors unless otherwise noted below
Main fax number ..... (508) 875-8931
24-hour news tip line... (508) 620-7716

E-MAIL

Our Web address is **www.computerworld.com.**
Staff members' e-mail follows this form: **firstname_lastname@computerworld.com.**
For IDG News Service correspondents: **firstname_lastname@idg.com.**

LETTERS TO THE EDITOR

Letters to the editor are welcome and should be sent to: **letters@computerworld.com.**
Include your address and telephone number.

MAIL ADDRESS

PO Box 9171, 1 Speen Street, Framingham, Mass. 01701

SUBSCRIPTIONS/BACK ISSUES

Subscription rates: U.S., $99.99/year; Canada, $130/year; Central and South America, $250/year; all others, $295/year

Phone ..... (888) 559-7327
E-mail ..... cw@omeda.com
Back issues..... (888) 559-7327

REPRINTS/PERMISSIONS

Contact ..... Renee Smith
Phone ..... (717) 399-1900, ext. 172
E-mail ..... reprints@computerworld.com
Visit **www.reprintbuyer.com** to obtain quotes and order reprints online.

COMPANIES IN THIS ISSUE

Page number refers to page on which story begins. Company names can also be searched at **www.computerworld.com**.

3AM LABS INC. 8
ACXIOM CORP. 44
AETNA INC. 44
AFLAC INC. 44, 62, 66
ALLEGRO CONSULTANTS INC. 12
ALLSTATE INSURANCE CO. 44
AMBIRONTRUSTWAVE 16
AMOOCS LTO. 14
AMERICAN CENTURY INVESTMENTS LLC 32, 44
AMERICAN FAMILY INSURANCE GROUP 44, 62, 67
AMERICAN FIDELITY ASSURANCE CO. 22, 44
AMERITRADE HOLDING CORP. 6
APOLLO GROUP INC. 44
APPTERO INC. 1
AQUILA INC. 44
ASSURANT SOLUTIONS 44
AUTOMOTIVE RESOURCES INTERNATIONAL 44, 82
AXALTO INC. 77
BEA SYSTEMS INC. 6, 8, 12
BEIJING MOBILE COMMUNICATIONS CORP. 14
BELLSOUTH CORP. 44
BOOZ ALLEN HAMILTON INC. 44, 62
BT RADIANZ 1, 7
BURLINGTON COAT FACTORY WAREHOUSE CORP 44
BURTON GROUP 6
CAESARS ENTERTAINMENT INC. 10
CALIFORNIA OEPARTMENT OF MANAGEO HEALTH CARE 16
CALIFORNIA STATE AUTOMOBILE ASSOCIATION 25, 44
CALTECH/MIT VOTER TECHNOLOGY PROJECT 19
CAPE CLEAR 6
CAROSYSTEMS SOLUTIONS INC. 1, 16
CARLSON COMANIES INC. 44
CARNEGIE MELLON UNIVERSITY 1
CATERPILLAR INC. 44
CDW CORP. 44
CENZIC INC. 8
CERNER CORP. 14, 44, 62
CERT COORDINATION CENTER 1
CGI GROUP INC. 6
CHICAGO MERCANTILE EXCHANGE HOLDINGS INC. 44
CHOICEPOINT INC. 16
CIENA CORP. 7
CISCO SYSTEMS INC. 7
CITRIX SYSTEMS INC. 8
CNA FINANCIAL CORP. 1, 44
COLUMBIA STEEL CASTING CO. 12
COMERICA INC. 44
COMPUTER ASSOCIATES INTERNATIONAL INC. 8
CONSUMERS AGAINST SUPERMARKET PRIVACY INVASION AND NUMBERING 6
CORNING INC. 44
CROSSROADS TECHNOLOGIES INC. 6
CUTTER CONSORTIUM 25
CVS CORP. 6
DAIMLERCHRYSLER AG 44
DATAPOWER TECHNOLOGY INC. 7
DISCOVER FINANCIAL SERVICES INC. 25, 44
DTE ENERGY CO. 44
EARTHLINK INC. 44
EASTMAN CHEMICAL CO. 44
EBAY INC. 12
ECLIPSE FOUNDATION 6
EDWARD D. JONES & CO. 44
EMC CORP. 6
ERNST & YOUNG INTERNATIONAL 44
EXAOEL INC. 8
FEDERAL SMART CARD PROJECT MANAGERS GROUP 77
FEDEX CORP. 22, 44
FENWICK & WEST LLP 1
FIOELITY ASSURANCE CO. 32
FORD MOTOR CO. 44
FORRESTER RESEARCH INC. 25
FORUM SYSTEMS INC. 7
GARTNER INC. 12, 62
GENERAL MILLS INC. 44, 62
GENERAL SERVICES ADMINISTRATION 77
GMAC INSURANCE HOLDINGS INC. 44
GOOGLE INC. 8, 12
GRANT THORNTON LLP 44, 62
GROUPE STERIA SCA 14
HARRAH'S ENTERTAINMENT INC. 10, 44
HEALTH CARE SERVICE CORP. 44
HEWITT ASSOCIATES LLC. 44
HEWLETT-PACKARO CO. 12, 14
HILTON HOTELS CORP. 44
HOGAN & HARTSON LLP 22, 44, 62
HOME HARDWARE STORES LTO. 14
HONEYWELL INTERNATIONAL INC. 44
HOUSTON JAVA USER GROUP 6
HSBC NORTH AMERICA HOLDINGS INC. 44
HYUNOAI INFORMATION TECHNOLOGY 14
IBM 6, 7, 8, 10, 14
IDC 1
INFOSYS TECHNOLOGIES LTD. 44
INTERNATIONAL LABOUR ORGANIZATION 14
INTERNATIONAL TRUCK ANO ENGINE CORP. 44
IRISE INC. 1
J.B. HUNT TRANSPORT SERVICES INC. 44
J.C. PENNEY CO. 44
JBOSS INC. 8
JUNIPER NETWORKS INC. 22, 44
JUPITERRESEARCH 23
KAISER FOUNDATION HEALTH PLAN INC. 16
KAISER PERMANENTE 16
KEYBANC CAPITAL MARKETS 10
LEHMAN BROTHERS INC. 7
LEXISNEXIS GROUP 44
LIGHTHAMMER SOFTWARE DEVELOPMENT CORP. 12
LONGSHINE INFORMATION TECHNOLOGY CO. 14
MANTECH INTERNATIONAL CORP. 7
MARRIOTT INTERNATIONAL INC. 44
MASTERCARO INTERNATIONAL INC. 1, 44
MAYO CLINIC 7
MAYO FOUNOATION FOR MEDICAL EDUCATION ANO RESEARCH 7
McOONALD INVESTMENTS INC. 10
MEASUREMENT SPECIALTIES INC. 12
MIAMI-DAOE COUNTY 44
MICROSOFT CORP. 12, 14, 16, 62
MINNESOTA LIFE INSURANCE CO. 44
MOUNT CARMEL HEALTH SYSTEM 44
NASDAQ STOCK MARKET INC. 44, 62
NATIONAL CITY CORP. 44
NATIONAL INFORMATION SOLUTIONS COOPERATIVE INC. 44
NATIONAL INSTITUTE OF STANDAROS ANO TECHNOLOGY 77
NATIONAL RURAL ELECTRIC COOPERATIVE ASSOCIATION 44
NATIONWIOE MUTUAL INSURANCE CO. 44
NEMOURS 44
NETSCALER INC. 8
NETWORK APPLIANCE INC. 32, 44
NETWORK SERVICES CO. 22
NEW ENGLAND JAVA USERS GROUP 6
NEW YORK JAVA SPECIAL INTEREST GROUP 6
NEXTEL COMMUNICATIONS INC. 44
NIELSEN MEDIA RESEARCH INC. 44
NISOURCE INC. 8
NORTEL NETWORKS LTD. 7
NORTHERN TRUST CORP. 44
NORTHROP GRUMMAN CORP. 44
NORTHSTAR SYSTEMS INTERNATIONAL INC. 1
NOVARTIS PHARMA AG 1
NOVARTIS PHARMACEUTICALS CORP. 25, 44
OHIO SAVINGS BANK 25, 44
OPENMPE INC. 12
ORACLE CORP. 8, 62
PARTNERS HEALTHCARE SYSTEM INC. 44, 25
PAYCHEX INC. 44, 62
PAYPAL INC. 12
PENNSYLVANIA NATIONAL MUTUAL CASUALTY INSURANCE CO. 44
PEPPERS & ROGERS GROUP 10
PHH MORTGAGE CORP. 44
PHILIP MORRIS USA INC. 44
PRINCIPAL FINANCIAL GROUP INC. 44
PROGRESS SOFTWARE CORP. 44
PUBLIX SUPER MARKETS INC. 25, 44
QUALCOMM INC. 44
QUEST OIAGNOSTICS INC. 44
QUICKEN LOANS INC. 32, 44
REACTIVITY INC. 7
REO HAT INC. 6
REGIONS FINANCIAL CORP. 44
ROYAL CARIBBEAN CRUISES LTD. 44
SAGEM MORPHO INC. 14
SAP AG 7, 12
SARVEGA INC. 7
SAS INSTITUTE INC. 44
SCHNEIOER NATIONAL INC. 44
SCIENCE APPLICATIONS INTERNATIONAL CORP. 22, 44, 62
SCIENTIFIC-ATLANTA INC. 44
SEAGATE TECHNOLOGY LLC 8
SENFORCE TECHNOLOGIES INC. 8
SERENA SOFTWARE INC. 1
SOLACE SYSTEMS INC. 7
SONIC SOFTWARE CORP. 6
SOUTHERN CALIFORNIA EOISON CO. 44
SSA GLOBAL TECHNOLOGIES INC. 12
STANFORO UNIVERSITY 19
STAPLES INC. 44
STATE STREET CORP. 44
SUN MICROSYSTEMS INC. 6
SUTTER HEALTH 44
SYMANTEC CORP. 6, 12
SYSINTEGRATORS LLC 14
TD WATERHOUSE USA 6
TEMPLE UNIVERSITY 44
TERADATA 10
TESCO PLC 10
THE APACHE SOFTWARE FOUNDATION 6
THE CAT FANCIERS ASSOCIATION INC. 12
THE MITRE CORP. 44, 62
THE SCO GROUP INC. 14
THE TOLLY GROUP 8
THE VANGUARO GROUP INC. 44
THE YANKEE GROUP 7
TIBCO SOFTWARE INC. 6
TORONTO-DOMINION BANK 6
TRANSACTTOOLS INC. 7
U.S. DEPARTMENT OF DEFENSE 77
U.S. DEPARTMENT OF HOMELANO SECURITY 14
U.S. POSTAL SERVICE 44
UNITEO PARCEL SERVICE INC. 44
UNIVERSAL HEALTH SERVICES INC. 44
UNIVERSITY OF KANSAS 32
UNIVERSITY OF MIAMI 32, 44
UNIVERSITY OF PENNSYLVANIA 25, 44
USAA 44
VERITAS SOFTWARE CORP. 6
VERIZON WIRELESS 44
VISION SERVICE PLAN 44, 62
WACHOVIA CORP. 1
WEST, A THOMSON BUSINESS 44
WHITEFENCE INC. 6
XEROX CORP. 44

Feds Face Deadlines on Smart ID Cards

Plans due this week; technical issues, coordination pose hurdles for agencies

BY JAIKUMAR VIJAYAN

TIME is running out for federal agencies to comply with a 2004 presidential directive calling for governmentwide adoption of smart cards to authenticate employees for access to buildings and IT systems.

Today, all major agencies are required to submit implementation plans to the White House Office of Management and Budget that describe how they intend to meet the smart-card requirements outlined in Federal Information Processing Standard 201.

Under the two-step plan, agencies have until Oct. 27 to implement the first phase of FIPS-201, which involves developing new processes for verifying the identities of employees, registering them and issuing ID cards. The deadline for the second phase, when agencies will actually start issuing the smart cards, is October 2006.

The requirements stem from a directive that calls for electronic identity cards to be issued to all federal employees and contractors as part of a bid to better secure access to government facilities and IT systems. The cards must support two-factor authentication via digital certificates, a password or personal identification number, and biometric identifiers. They also are expected to be interoperable across all federal agencies.

The effort required for most agencies to conform to the mandates makes meeting the two October deadlines "very challenging," said John Moore, chairman of the Federal Smart Card Project Managers Group and director of the Office of Governmentwide Policy at the General Services Administration in Washington.

"Both of these are very ambitious targets," Moore said. "It's a rather unique project in that it affects all federal employees and contractors, so it requires an unusual amount of coordination among agencies."

Because the Personal Identity Verification (PIV) cards will control access to both physical and IT assets, IT departments within agencies have to work with their counterparts on the physical security side, as well as with badging and access-control staffers and human resources personnel, Moore said.

There are some significant technical issues as well.

The PIV cards will be based on a new specification developed by the National Institute of Standards and Technology. The specification is designed to make the smart cards more interoperable than existing ones, said Curt Barker, NIST's FIPS-201 program manager.

But the change means that several agencies already using smart cards based on an older standard will have to move to the new one, Barker said. For instance, the U.S. Department of Defense has rolled out more than 4 million of the previous-generation cards.

Although Barker said the transition is intended to be "evolutionary," he noted that agencies such as the DOD could find things "a bit more complex" than agencies that are implementing smart-card technology for the first time.

Some of the technical details of the smart cards themselves are still in draft form, said Neville Pattison, director of technology and government affairs at Axalto Inc., a smart-card manufacturer in Austin.

For example, Pattison and Barker both said NIST has yet to decide whether the cards should support full biometric images or smaller ones that use fewer data points for matching fingerprints and other physical characteristics.

Large-scale manufacturing of PIV cards is unlikely to happen before the second half of next year, said Pattison, who was on a team that acted as a liaison between agencies and technology vendors. **55224**

FEDERAL ID CARDS

What's Happening

- NIST last week released draft guidelines detailing what agencies need to do to be accredited to issue the PIV cards.
- Agencies also can use the guidelines to plan and design their card-issuing services.
- Federal officials, vendors and individuals can comment on the draft through July 10.

Continued from page 1

Simulation

that calls for all new development projects to use simulation tools from El Segundo, Calif.-based iRise Inc. instead of paper-based requirements.

"No matter how thick or thin the requirements are, if it's [on] paper, the user is not going to read it to the level they should be reading it," said Karl Gouverneur, senior vice president of solutions and architecture at Chicago-based CNA. "A simulation brings the product to life and shows exactly what [business users] are going to get."

The iRise tools allow business analysts to test-drive applications through simulation of the log-in process, data and business logic, and page layout — without writing code.

CNA uses the tool to better communicate requirements from business users to software developers — including offshore developers — and to shorten the requirements cycle, Gouverneur added. "[The simulation] is a lot easier to communicate to people halfway around the world than text requirements," he said.

> **"A simulation brings the product to life and shows exactly what [business users] are going to get."**
>
> **KARL GOUVERNEUR,**
> SENIOR VICE PRESIDENT,
> CNA FINANCIAL CORP.

This week, iRise plans to unveil iRise 5, the fifth generation of its collaborative application-definition platform. The new version will package simulation capabilities along with text descriptions and user scenarios in a self-contained file that can be shared by multiple users.

Less Labor Required

Wachovia Corp. uses iRise simulation tools in its user design laboratory to simulate Web applications before deploying them to internal users or consumers, said Carter Hansen, design director of the user center in the Charlotte, N.C.-based bank's e-commerce division.

"The more traditional way ... required a technical developer to build that prototype for us," he said. "We had to work across organizations and articulate the requirements rather than build it to suit our needs." The new iRise version should reduce the labor required to build simulated applications and increase Wachovia's ability to manage the look and feel of a simulation, Hansen added.

Melissa Webster, an analyst at research firm IDC, listed iRise and Serena Software Inc. as the leading application simulation tool providers and said she expects that more will soon enter the fray.

The vendors' tools are designed to reduce rework on new applications, a task that Webster said can take up 20% of application developers' time in large companies.

"Flawed requirements is the leading cause of the failure of new applications," she said.

San Mateo, Calif.-based Serena in May unveiled software designed to simulate, visualize and prototype business processes and application requirements. Serena's ProcessView Composer is based on technology that it acquired in March from Apptero Inc.

NorthStar Systems International Inc., a San Francisco-based firm that provides wealth management software and services for retail brokerages and banks, uses Serena's tool to let business analysts provide visual simulations of applications to clients, said Bill King, director of products and professional services.

"A lot of times, it is easier for people to react to something that is visual — what an application looks like and how it behaves," King said. **55225**

Correction

THE CHART THAT accompanied a story about IBM's new Opteron-based blade server in last week's News section ("IBM Expands Opteron to Its Blade Servers") incorrectly listed the amount of memory supported by the LS20 system. The blade can be configured with up to 8GB of memory.

Periodical postage paid at Framingham, Mass., and other mailing offices. Posted under Canadian International Publication agreement #40063800. CANADIAN POSTMASTER: Please return undeliverable copy to PO Box 1632, Windsor, Ontario N9A 7C9. Computerworld (ISSN 0010-4841) is published weekly; except a single combined issue for the last two weeks in December by Computerworld, Inc., 1 Speen Street, Box 9171, Framingham, Mass. 01701-9171. Copyright 2004 by Computerworld Inc. All rights reserved. Computerworld can be purchased on microfilm and microfiche through University Microfilms Inc., 300 N. Zeeb Road, Ann Arbor, Mich. 48106. Computerworld is indexed. Back issues, if available, may be purchased from the circulation department. Photocopy rights: permission to photocopy for internal or personal use is granted by Computerworld Inc. for libraries and other users registered with the Copyright Clearance Center (CCC), provided that the base fee of $3 per copy of the article, plus 50 cents per page, is paid directly to Copyright Cleerance Center, 27 Congress St., Salem, Mass. 01970. Reprints (minimum 100 copies) and permission to reprint may be purchased from Renee Smith, Computerworld Reprints, c/o Reprint Management Services, Greenfield Corporate Center, 1808 Colonial Village Lane, Lancaster, Pa., 17601, (717) 399-1900, Ext. 172. Fax: (717) 399-8900. Web site: www.reprintbuyer.com. E-mail: reprints@computerworld.com. Requests for missing issues will be honored only if received within 60 days of issue date. Subscription rates: $5 per copy; U.S. – $99.99 per year; Canada – $130 per year; Central & So. America. $250 per year; Europe – $295 per year; all other countries – $295 per year. Subscriptions call toll-free (888) 559-7327. POSTMASTER: Send Form 3579 (Change of Address) to Computerworld, PO Box 3500, Northbrook, Ill. 60065-3500.

FRANK HAYES ■ FRANKLY SPEAKING

Best to Worst

ENOUGH ALREADY with the Best Places to Work in IT! Anyone reading this issue of *Computerworld* (see stories starting on page 25) now has a large pile of ideas for making IT employees more productive, more loyal and happier. With this much material to work from, just about any IT shop should be able to climb that curve.

But what if you have a less fruitful goal: competing to be one of the *worst* places to work in IT? Here at Frankly Speaking, we're ready to help with 10 taut, to-the-point tips tailored for CIOs and IT managers who can't be bothered to read a lot of case studies or good advice. You want to get bad fast? Here's how:

Hide information. If your IT staffers don't absolutely need to know, don't tell them — not even a hint. True, there's lots of background info that may help them understand what a project or system is for, and thus how to make it better. But knowledge is power. And you don't want your staff to have much of either.

Blame. Blame your staff in front of non-IT managers and users when a system goes down or a project falls behind schedule. Blame individual IT people whenever anything goes wrong. Single them out in front of their peers. How can problems be dealt with unless everyone knows whose fault it is?

Go slow. Especially with decisions. Fast results raise expectations. They make IT workers feel like they're accomplishing something. They make users feel like IT can respond in a timely way to what they need. And really, who wants that kind of pressure?

Distrust. Assume developers don't understand their projects. Assume project managers are padding schedules and budgets. Assume operations staff can't keep things working. Display your contempt for their competence, and eventually they'll live up (or down) to your expectations. After all, if your IT people were any good at what they do, they'd have your job.

Reduce visibility. IT workers don't need to see the business. They don't need the business to see them. If they watch line-of-business employees using the systems IT develops and runs, the IT people may get swelled heads. They may also spot ways to improve the systems and make line employees more effective — and that will take up precious IT budget and resources. Better to keep the IT shop a black box: Nobody sees in, nobody sees out.

Block opportunities. Promotions? New technologies? Exciting work? Forget it. *Of course* your staff should be satisfied doing the same old thing forever. You are, right?

Stifle arguments. You don't want IT staffers debating the merits of one technology over another. You don't want them fighting over details or approaches on a project plan. True, that's the only way they'll overcome disagreements and misunderstandings, by thrashing them out. But peace and quiet are more important than clarity. Besides, if they start arguing with one another, next thing you know, they'll be questioning your decisions.

Outlaw play. You're paying these people to work, work, work — not to waste time chatting, letting off steam or building camaraderie. Sure, they'll do it anyway, and if you forbid it, they'll waste even more time hiding it from you. But you've got discipline to maintain. If it's not directly work-related, ban it.

Discourage experiments. Even on a small scale. They're risky. They're uncertain. And even if there are good ideas out there to be tried, you don't want to be tarred with having approved a failed experiment. And you surely don't want to approve anyone else's idea for an experiment that might end up a success.

Don't listen. Not to your staff, not to line users, not to your peers. If it's worth hearing, you've already heard it from your boss.

Remember these 10 ways to become a worst place to work. Just stay focused on them, and you'll always go wrong. **55202**

FRANK HAYES, *Computerworld*'s senior news columnist, has covered IT for more than 20 years. Contact him at **frank_hayes@computerworld.com**.

Power Off, Power On

IT manager is being shown the hardware for a system recently deployed on time and under budget. Has it been thoroughly tested in *every* aspect? he asks. "The development team all nodded in the affirmative," says a pilot fish on the scene. "At which point, he bent over and pulled the power plug on the UPS. Almost instantly, pagers were going off as the UPS and the server shut down. The problem: No one thought to purchase a battery for the UPS!"

SHARK TANK

Never Mind

Truck hits a power pole down the street, and pilot fish is working feverishly to shut down all the servers in the darkened building before the UPSs run down. As fish heads for the main computer room, a user from accounting asks, "Is the network still down?" Fish figures she's kidding, but she's not. Don't you know we just had a power outage? he asks. "Yes," she says, "but my laptop is still on. Why isn't the network? Don't you have it on battery?"

Net Loss

Power goes out and returns at this political campaign office, and now none of the PCs – which are usually on all the time – will boot. The error message: "Boot from network or quit. Searching for server (DHCP)." "It turns out the nephew of one volunteer set up the server and network," says an insider pilot fish. "When he couldn't fix the server, he removed it without setting the PCs to boot on their own. Now no one has access to the network, and there's no extra money in the campaign fund to fix the systems."

The Other Part

User tells help desk pilot fish that her PC is totally locked up. Power the PC off and then back on, fish advises. Minutes later, user calls back: "It's right back where it was before and is still hung." Fish makes the trip to user's desk. Power it down again, fish suggests. User turns off the monitor and turns it back on. Fish sighs and shows user how to turn off the PC sitting beneath her desk. Says user: "I didn't even know there *was* another part under there!"

It's All in Your Head

IT pilot fish gets a new PC monitor and notices a high-pitched sound. He calls a tech over, but the tech can't figure it out because he can't hear it. They call in the vendor's tech, who can't hear it either. "It kept bothering me until one day our building had an electricity failure," fish says. "All went dead. We sat in a very quiet and dark building. That was when I realized I continued hearing the ringing sound – and I went for a hearing test."

SHARKY'S LISTENING. Tell me your true tale of IT life at **sharky@computerworld.com**. You'll score a sharp Shark shirt if I use it. And check out the daily feed, browse the Sharkives and sign up for Shark Tank home delivery at **computerworld.com/sharky**.

sun.com/share

Dirk Meyer
President
AMD Microprocessor Sector

Sherry Q. Moore
Sun Solaris
Kernel Engineer

John Fowler
Sun Network Systems
Group EVP

Beth S. Beasley
Sun x64
Product Manager

Wall Street Financial Analyst

Marty Seyer
Vice President
AMD Microprocessor Sector

Share the fast lane. The pace of modern-day investing can boggle the mind. And overwhelm the data center. So Sun and AMD are working on faster, next-generation systems for Wall Street. Benchmarks show that Sun Fire™ V40z servers, employing Dual-Core AMD Opteron™ processors, deliver world record performance.[1] And dual-core processing helps save money, too. How much? About $2 million a year in power costs alone.[2] That's what financial firms call a smart investment. The performance is the asset. The network is the computer.™ Share.

Sun microsystems

AMD 64 Opteron

share

(1) For a complete list of results visit: http://www.sun.com/v40z/benchmarks.html (2) Based on World Wide average cost per kWh of 8 cents for a data center with 4,000 Sun Fire™ V40z servers each with 4 dual-core Opteron™ processors.

Oracle Database 10*g*

$149 Per User

Standard Edition One

One CD

17 minute install

Easy to use

First class database . . . economy price

ORACLE®

oracle.com/standardedition
or call 1.800.633.0753

Terms, restrictions, and limitations apply. Standard Edition One is available with Named User Plus licensing at $149 per user with a minimum of five users or $4995 per processor. Licensing of Oracle Standard Edition One is permitted only on servers that have a maximum capacity of 2 CPUs per server. 17 minute install is based upon testing on a system with 1x866MHz Intel CPU, 512 Mb RAM running Red Hat Linux 2.1. Actual install times will vary and are dependent on system configurations. For more information, visit oracle.com/standardedition

Copyright © 2004, Oracle. All rights reserved. Oracle is a registered trademark of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.